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ABSTRACT

This is the thirty-third in a series of reports on research doctorates awarded by colleges and universities in the United States. The data presented in this report are from the annual Survey of Earned Doctorates, a census of research doctoral recipients who earned their degrees between July 1, 1998, and June 30, 1999. This survey, conducted since 1958, is sponsored by six federal agencies: the National Science Foundation, the National Institutes of Health, the U.S. Department of Education, the National Endowment for the Humanities, the U.S. Department of Agriculture, and the National Aeronautics and Space Administration. All survey responses become part of the Doctorate Records File, a virtually complete database on research doctorate recipients from 1920 to 1999. The overall response rate for the 1999 survey was 91.7 percent. The report begins by reviewing overall trends in research doctorates awarded by U.S. universities and continues by discussing trends in the seven broad fields in which research doctorate recipients earn their degrees. Trends in doctorate awards by sex, race/ethnicity, citizenship, parental education, and time to degree are described next, and the report concludes with discussion of the sources of financial support during graduate school and the postgraduation status and plans of doctorate recipients. A special section is devoted to the interstate migration of U.S. doctorate recipients from birth to initial postgraduation location. The report includes numerous figures and tables. Appendices include additional statistics, technical notes, and the survey instrument. (EV)

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Doctorate Recipients from United States Universities:

Summary Report 1999

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Survey of Earned Doctorates

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HIGHLIGHTS

This report presents data on recipients of research doctorates awarded by U.S. universities from July 1, 1998, through June 30, 1999. This information is taken from the 1999 Survey of Earned Doctorates (SED), an annual census of new doctorate recipients.

The 392 universities in the United States that conferred research doctorates awarded 41,140 doctorates during the 1998-1999 academic year (the eligibility period for the 1999 SED). This compares to 42,683 doctorates awarded in 1998 (a decline of 3.6 percent in one year), and marks the first annual decline in fourteen years.

The number of doctorates awarded by broad field in 1999 was greatest in life sciences, which conferred 8,126 Ph.D.s. The numbers for 1999 conferred in the other broad areas were 7,036 in social sciences; 6,324 in the physical sciences and mathematics (combined); 6,557 in education; 5,468 in the humanities; 5,337 in engineering; and 2,292 in business and other professional fields. The declines from 1998 were 5 percent in life sciences, 6 percent in physical sciences and mathematics, and 10 percent in engineering. The numbers of doctorate recipients in the other broad fields were virtually the same in the 1997-98 and 1998-99 academic years.

Women received 17,493 doctorates, or 42.5 percent of all doctorates granted in 1999. This is the highest percentage ever for women, continuing a 30-year upward trend. Women earned 44.7 percent of the doctorates granted in life sciences, 54.5 percent in social sciences, 48.9 percent in humanities, 64.2 percent in education, and 41.0 percent in business/other professional fields. In the physical sciences and engineering, they constituted 23.4 percent and 14.9 percent, respectively.

Nearly 16 percent of all doctorates awarded to U.S. citizens in 1999 were earned by U.S. racial/ethnic minority groups. This is the largest percentage ever, and continues a steady upward trend. Among the 27,177 doctorates earned in 1999 by U.S. citizens who identified their race/ethnicity (98.4 percent of all U.S. citizen doctorates), 1,596 doctorates were earned by blacks, 1,109 were earned by Hispanics, 1,324 were earned by Asians, and 219 were earned by American Indians. The broad fields with the largest percentages of minorities were education, in which blacks were the predominant minority group, and engineering, in which Asians were predominant.

U.S. citizens received 70.8 percent of all doctorates earned in 1999 by individuals who identified their citizenship status (94.8 percent of all doctorate recipients identified their citizenship). The People's Republic of China was the country of origin for the largest number of non-U.S. doctorates in 1999, with 2,400, followed by India with 1,077, Korea with 1,017, Taiwan with 981, and Canada with 473. The percentage of doctorates earned by U.S. citizens ranged from lows of 48.8 percent in engineering and 57.2 percent in the physical sciences, to highs of 88.6 percent in education and 81.8 percent in the humanities.

Median time to degree since receipt of the baccalaureate was 10.4 years in 1999, virtually unchanged from 1998 and 1997 (10.4 and 10.5 years, respectively). Median time to degree since first enrollment in any graduate program was 7.3 years in 1999, also unchanged from 1998 and 1997 (7.3 years in both).

Most of the 1999 doctorate recipients (60.9 percent) received the majority of their financial support for graduate education from such program- or institution-based sources as university fellowships or teaching and research assistantships. Half (49.9 percent) of the 1999 doctorate recipients reported no educational indebtedness at completion of the Ph.D.; 13.3 percent reported cumulative education debt levels of $30,000 or more.

About 70 percent of the new Ph.D.s had definite postgraduation commitments for employment or continued study when they completed the SED survey. Of those, 69.8 percent will work and 30.2 percent will continue their studies as postdoctorates. For U.S. citizens, 51.7 percent of those with firm employment commitments noted higher education as their intended work sector. About one-fifth (21.9 percent) indicated industry or self-employment; 8.7 percent said some level of government; the remaining 17.6 percent indicated "other."

Doctorate Recipients from United States Universities: Summary Report 1999

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NOTICE

This report is based on data collected in the Survey of Earned Doctorates (SED) conducted for the National Science Foundation (NSF), the National Institutes of Health (NIH), the U.S. Department of Education (USED), the National Endowment for the Humanities (NEH), the U.S. Department of Agriculture (USDA), and the National Aeronautics and Space Administration (NASA), by the National Opinion Research Center (NORC) under NSF Contract No. SRS-9712655. Findings in this publication represent analyses developed by NORC, which have been reviewed, but not necessarily verified, by the participating Federal agencies and do not necessarily reflect the views of the sponsoring agencies.

NSF publications from the Survey of Earned Doctorates and the Doctorate Records File are available free on request (see inside back cover). Standardized tables on baccalaureate origins of Ph.D.s by major field of doctorate and trend tables on citizenship, race/ethnicity, and sex of Ph.D.s by fine field of doctorate are available for a fee. Customized tables can also be prepared at cost. For more information, please contact:

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This report is available on the NORC web-site: http://www.norc.uchicago.edu/studies/sed/sed1999.htm. Reports on science and engineering doctorates can be found on the National Science Foundation's web-site: http://www.nsf.gov/sbe/srs/sengdr/start.htm.

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***** IMPORTANT NOTICE *****

The estimates reported for the Survey of Earned Doctorates (SED) are simple tabulations of all available information, with no adjustment for nonresponse. Therefore, differences in response rates from year to year can produce numerical fluctuations that may not be related to real trends.

Although response to the SED has been as high as 95 to 98 percent over time, it declined to 92 percent during the 1980s. In an effort to improve the response rate, the survey methodology was modified in the years after 1989. Response rose, stabilizing around 95 percent from 1991 to 1995. However, the response rates were 92.8 percent for 1996 and 91.5 percent for both 1997 and 1998. This year, the response rate rose slightly to 91.7 percent. (*Note:* These percentages represent *self-report rates*, that is, the proportion of questionnaires completed by research doctorate recipients. While survey forms containing partial information filled in by either the doctoral institution or the survey contractor are not included in these rates, tables in this report incorporate the available data from these sources.) The self-report rate for 1999 may increase slightly in the next year if additional questionnaires are received from research doctorate recipients. See appendix C for a table giving survey response rates from 1967 to 1999.

Item response rates have shown a pattern of improvement since 1990—a natural consequence of the increase in the overall self-report rate, as well as a result of format revisions to the questionnaire and follow-ups for missing information. In 1990, new follow-up procedures were implemented to increase coverage of several variables: birth year, sex, race/ethnicity, citizenship status, country of citizenship, baccalaureate year and institution, and postgraduation plans. Response rates for these variables have since improved—especially for citizenship and race/ethnicity, resulting in an increase in the reported numbers of minority Ph.D.s. Whether or not individuals completed the survey questionnaire, the following four data items are available for most all recipients: sex, Ph.D. institution, field, and year.

The data for a given year are updated the following year with any responses received *after* survey closure. Postsurvey adjustment was most significant for 1990 and 1991 Ph.D.s, with the largest impact on the number of blacks. For both of these years, the total number of black Ph.D.s increased by about 7.5 percent in the year after survey closure. The survey cycle was then extended to allow receipt of more follow-up information before closure, resulting in much smaller postsurvey adjustments for the 1992 through 1995 data (a 1.4 percent increase in black Ph.D.s for 1992, a 0.2 percent increase for 1993, a 0.5 percent increase for 1994, and a 1.5 percent increase for 1995).

Adjustments to data are presented in reports subsequent to the initial report for a survey. For example, updates for 1994 appeared in *Summary Report 1995*. Updates to 1999 data will be presented in next year's report.

DOCTORATE RECIPIENTS FROM UNITED STATES UNIVERSITIES: SUMMARY REPORT 1999

Introduction

Doctorate Recipients from United States Universities: Summary Report 1999 is the thirty-third in a series of reports on research doctorates awarded by colleges and universities in the United States.[1] The data presented in this report are from the annual Survey of Earned Doctorates (SED), a census of research doctoral recipients who earned their degrees between July 1, 1998, and June 30, 1999. This survey, conducted since 1958, is sponsored by six Federal agencies: the National Science Foundation, the National Institutes of Health, the U.S. Department of Education, the National Endowment for the Humanities, the U.S. Department of Agriculture, and the National Aeronautics and Space Administration. All survey responses become part of the Doctorate Records File (DRF), a virtually complete database on research doctorate recipients from 1920 to 1999. The overall response rate for the 1999 survey was 91.7 percent.[2]

Organization

Summary Report 1999 begins by reviewing overall trends in research doctorates awarded by U.S. universities and continues by discussing trends in the seven broad fields in which research doctorate recipients earn their degrees. Trends in doctorate awards by sex, race/ethnicity, citizenship, parental education, and time to degree are described next, and the report concludes with discussion of the sources of financial support during graduate school, and the postgraduation status and plans of doctorate recipients.

A special section, which follows the discussions of trends, financial support and indebtedness, and postgraduate plans of recipients in the main report, is devoted to the interstate migration of U.S. doctorate recipients from birth to initial postgraduation location. This section

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[1] The Survey of Earned Doctorates collects information on *research* doctorates only. This survey differs from the U.S. Department of Education's collection of the number of doctorate degrees awarded per institution for all fields. For an evaluation of the differences, see National Science Foundation, 1993, *Science and Engineering Doctorates 1960-1991*, NSF 93-301, Detailed Statistical Tables, pp. 2-6. Washington, DC.

[2] See appendix C for information on response rates for the SED.

presents analyses of geographic mobility with regard to sex, marital status, race/ethnicity, family background, field of study, and postgraduate employment.

Figures displaying selected trend data accompany the brief narratives of key survey findings. The numbers and percentages from which the figures are drawn are contained in a set of tables following the main text. A reference at the bottom of each figure indicates the corresponding table number. Basic tables of statistics for 1999 research doctorate recipients are shown in appendix A, and trend tabulations for the previous ten-year period (1989 to 1999) are presented in appendix B. Appendix C provides technical notes, including response rates, and other information related to tables and figures in the report. Appendix D is the SED questionnaire for the 1999 academic year. Appendix E lists field of study classifications and research degree titles employed in the SED.

Trends In Doctorate Recipients

Overall Trends and Rates of Change

After thirteen consecutive years of annual increases in the number of research doctorates received, a 3.6 percent decrease from the previous year occurred in the 1999 academic year. For the twelve-month period ending June 30, 1999, U.S. universities awarded 41,140 research doctorate degrees,[3] compared with 42,683 for the previous year (see table 1). Only between 1976 and 1977 has there been an annual percentage drop – 3.7 percent – larger than this one. For the last 40 years, the increase in the number of doctorates awarded by U.S. universities has averaged 3.8 percent per year.

Between 1961 - when the number of annual doctorates awarded exceeded 10,000 for the first time - and 1967, the annual growth rate was almost 12 percent, and the number of doctorates awarded virtually doubled (20,403). Four years later, in 1971, the annual total topped 30,000 (31,867) for the first time. The decades of the 1970s and 1980s saw periods of more modest increases, and in 7 of those 20 years annual totals even declined. The total figure did not exceed 40,000 until 1994 (41,034), 23 years after it had reached the 30,000 plateau; not until 1989 did the annual total – 34,327 – exceed the previous high-water mark of 33,755 set in 1973. Over the past few years, the annual rates of increase have become smaller than they were in the first half of the decade of the 1990s, including gains of only 0.3 percent per year for both 1997 and 1998; thus the 1999 total number of doctorates is approximately the same as it was five years ago (41,140 versus 41,034). (See figures 1 and 2.)

Overall in 1999, 57 percent of the doctorate recipients were male, about two-thirds were U.S. citizens, approximately 64 percent were white, and about 6 in 10 recipients were currently married or living in a marriage-like relationship. The typical recipient was slightly under 34 years of age at the time the degree was awarded. (Detailed statistics are provided in the tables and discussed later in this report.)

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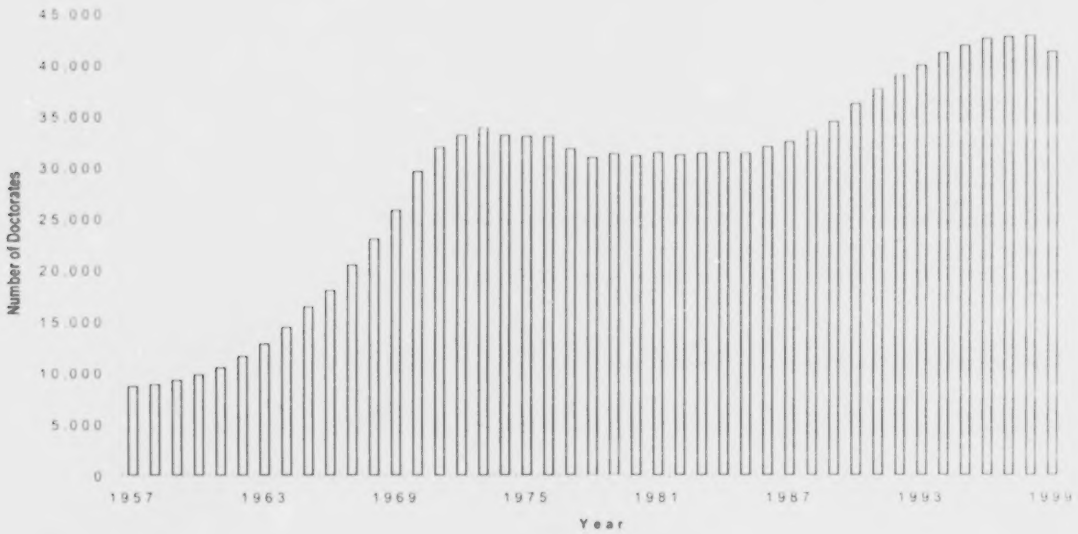
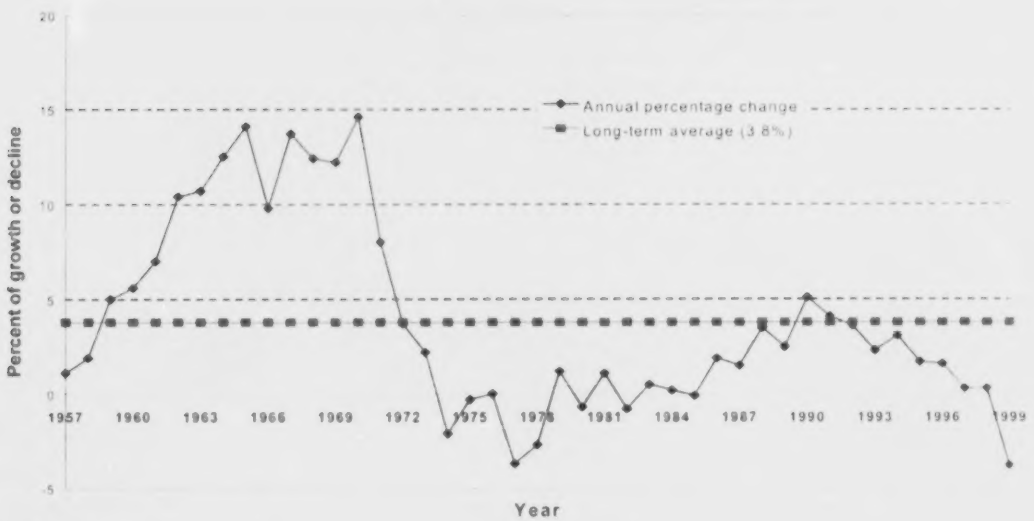
[3] Doctorates are reported by academic year (from July 1 of one year through June 30 of the following year) and include *research* and *applied research doctorates* in all fields. Doctoral degrees such as the Ph.D., D.Sc., and Ed.D. are covered by this survey; professional degrees (e.g., M.D., D.D.S., J.D., Psy.D.) are not. A full list of included degrees can be found in appendix E. For convenience throughout this report, the terms "Ph.D." or "doctorate" are used to represent any of the research doctoral degrees covered by the survey. Please note that if an individual earned a second research doctorate, the second doctorate is not included in the SED.

Figure 1: Doctorates awarded by U.S. colleges and universities, 1957-1999



See Table 1.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 2: Annual growth or decline in doctorates awarded by U.S. colleges and universities, 1957-1999



See Table 1.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Doctorate-granting Institutions, Doctorate Recipients per Institution, and Geographical Distribution

During the 1999 academic year, 392 universities in the United States and Puerto Rico awarded at least one research doctorate. This number has remained relatively level for the past few years, following a steady increase from the early 1960s (174 in 1961) until 1996 (392).

The mean number of doctorates awarded per institution in 1999 was 105; the median was 43. (See table 2 for the mean number of doctorates awarded per institution from 1961 to 1999.) As the substantial difference between the mean and the median suggests, a relatively small number of institutions grant a disproportionately large number of doctorates. Just 47 institutions granted 50 percent of all doctoral degrees in 1999. Eighteen institutions accounted for 25 percent of all doctorate degrees granted; the second quartile contained 29 institutions, the third quartile included 55 universities; and the remaining 290 institutions together accounted for the final 25 percent of doctorates.[4]

The University of Texas-Austin granted the largest number of doctorates, 752, or 1.8 percent of all doctorates awarded, followed by the University of California-Berkeley (717) and the University of Wisconsin-Madison (685). These three institutions granted the most doctorates in 1998 and 1997 as well, although Berkeley and Wisconsin changed positions within the top three. For 1999, 10 institutions granted 15.6 percent of all doctorates; the corresponding figure for 1998 was 16.2 percent.

With respect to broad field, the University of California-Berkeley awarded the most doctorates (172) in the physical sciences. The Massachusetts Institute of Technology (MIT) granted the most engineering doctorates (194), while the University of Wisconsin-Madison led all universities in the life sciences (178) and the University of Texas-Austin topped the list for social science doctorates (113). Harvard granted the largest number of doctorates in the humanities (146); Nova Southeastern University had the highest total in education (428), and Texas-Austin granted the most doctorates in the heterogeneous "professional/other" category (51). See table 3 for the top 20 ranked institutions for each of the seven broad fields.

The numbers of doctorates awarded by broad field are also concentrated in a relatively small number of institutions. While the top 10 degree-granting universities awarded 15.6 percent of all doctorates in 1999, the concentration was higher in six of the seven broad fields: 19.5

[4] Calculations derived from appendix table A-7.

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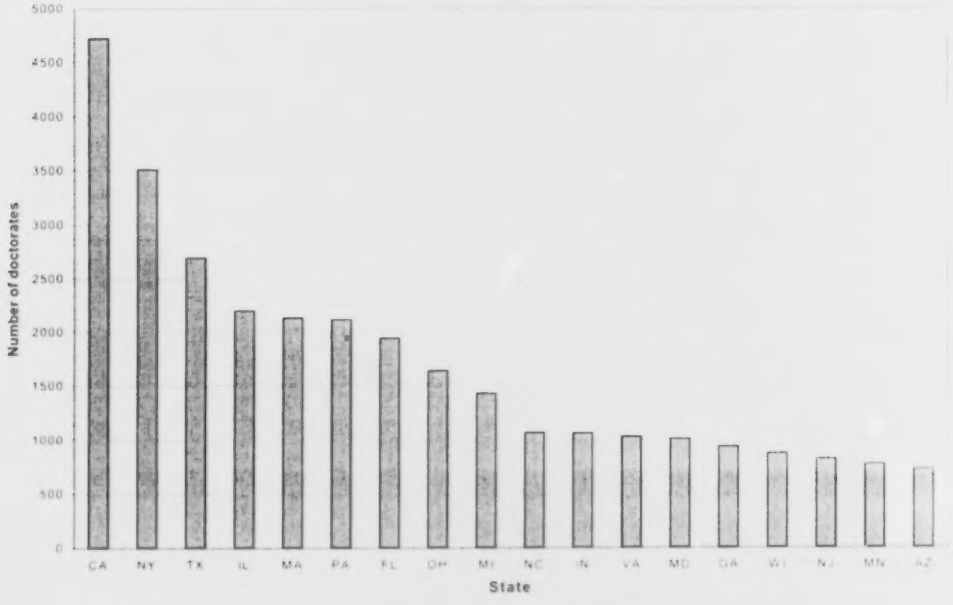
percent in the physical sciences, 28.1 percent in engineering, 18.7 percent in the life sciences, 22.9 percent in the humanities, 21.7 percent in education, and 17.0 percent in the professional/other category. Only in the social sciences was the concentration lower than the overall average (14.8 percent). See table 3.

As shown in figure 3 and table 4, California universities led the nation by awarding 4,724 doctorates, or 11.5 percent of all doctorates in 1999. New York institutions granted the next highest number of doctorates (3,511), followed by institutions in Texas (2,697), Illinois (2,201), Massachusetts (2,132), Pennsylvania (2,115), Florida (1,944), and Ohio (1,638). These eight states accounted for more than half – 51.0 percent – of all doctorates awarded in 1999.

Figure 3. Top 20 doctorate granting states in 1999



See Table 4.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Doctorates by Broad Field

The Survey of Earned Doctorates (SED) classifies research doctorate degrees into approximately 290 fields of specialization (these are listed on pages 8 and 9 of the questionnaire included in appendix D). For presentation purposes here, these are grouped into seven broad fields: physical sciences,[5] engineering, life sciences,[6] social sciences (including psychology), humanities, education, and a heterogeneous group of professional and other fields (including business, communications, social work and theological programs). Information about the levels and trends in these broad fields is of particular interest to Federal sponsors of doctoral research, academic administrators, and professional associations, among others. These groups rely on these data to make informed decisions that influence graduate education and the nation's labor force.

The overall decrease of 3.6 percent in doctorates awarded between the 1998 and 1999 academic years occurred across the board: all seven broad field categories experienced declines in the absolute number of degrees, with engineering and the physical sciences registering the largest percentage drops, 9.8 percent and 6.2 percent, respectively. The social sciences, humanities, and education showed the smallest decreases. The life sciences, with 8,126 doctorates, remained the largest single broad field, as it has since 1988.

Compared with five years ago (1994), when the total number of doctorates awarded was approximately the same as it was in 1999, engineering and the physical sciences showed large decreases: 8.3 percent and 7.3 percent lower in 1999 than in 1994, respectively.[7] Humanities registered the largest percentage increase from 1994 to 1999, with 15.3 percent more degrees awarded in 1999 than five years earlier. The life sciences (+5.0 percent) and social sciences (+6.4 percent) were also higher in 1999; education was 2.2 percent lower. (See table 5.)

The four broad fields that together constitute "science and engineering" (S&E)—physical, life, and social sciences plus engineering—represented 65.2 percent of all doctorates awarded in 1999. Ten years ago (1989) they accounted for approximately the same percentage of all doctorates (65.0 percent), but compared with 25 years ago (1974), the S&E fields represent

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[5] The physical sciences include mathematics and computer sciences, as well as the traditional physical science disciplines.

[6] The life sciences encompass biological, agricultural, and medical sciences.

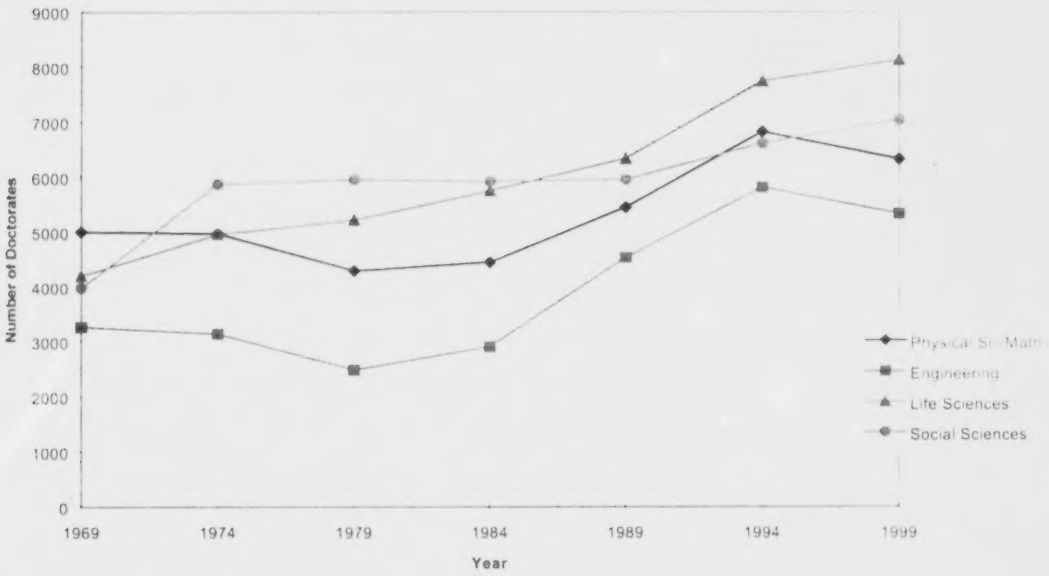
[7] The smaller, heterogeneous "professional/other" category registered the largest percentage decrease between 1994 and 1999, 11.4 percent.

a larger percentage of total degrees in 1999 than in 1974 (57.4 percent). (See table 5.) However, these combined S&E fields showed a 5.1 percent decrease between 1998 and 1999 and a 0.6 percent smaller total in 1999 than in 1994.

Of the 26 subfields included in table 5, 19 experienced declines in number of doctorates awarded between 1998 and 1999. Within the S&E category, only two subfields -- both in the social sciences -- had gains; the other 13 S&E subfields showed declines between these two academic years. Comparing 1994 with 1999, 12 of the 26 subfields had larger absolute numbers of doctorates in 1999, and 14 had smaller numbers; within S&E fields in these same two years, 6 subfields had larger totals in 1999 than in 1994, and 9 had smaller ones. For both the one-year and five-year comparisons within S&E, the physics and astronomy subfields displayed the largest declines and anthropology the biggest gains.

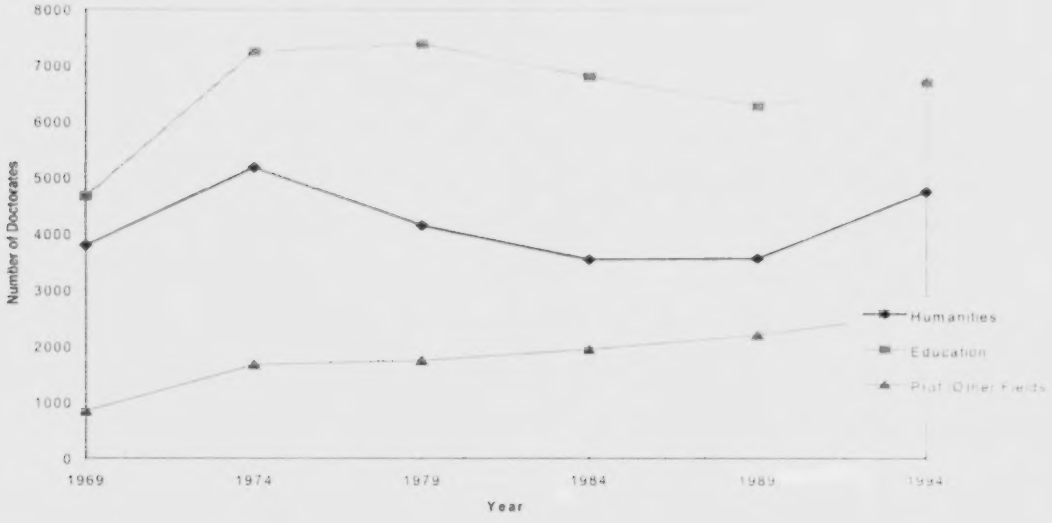
Comparing a slightly different set of subfields – see table 6 – over a 10-year interval between 1989 and 1999, the three disciplines with the largest percentage increases were neuroscience (141.4 percent), cell biology (114.3 percent), and history (87.9 percent). Only one subfield – agricultural sciences – showed a decline over this period (-10.9 percent).

Figure 4: Science and engineering doctorates awarded by broad field, 1969-1999



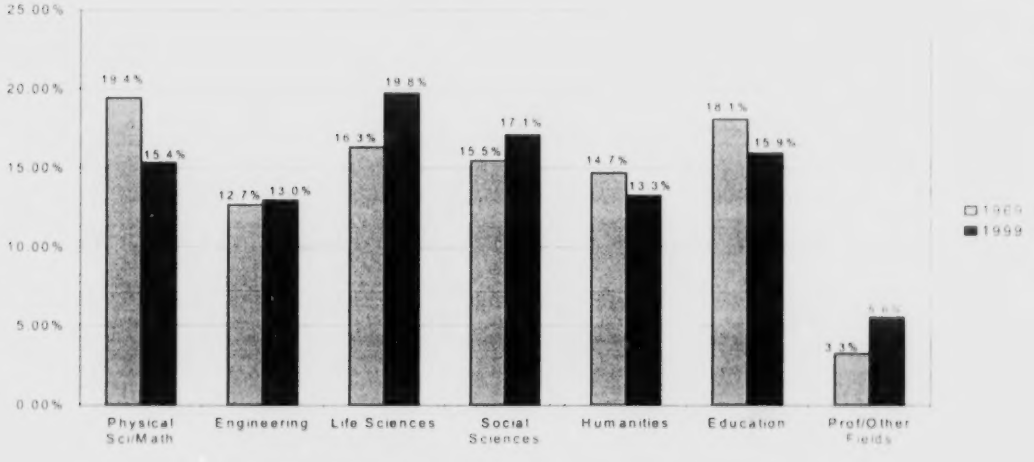
See Table 5.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 5: Humanities, education, and professional/other doctorates awarded by broad field, 1969-1999



See Table 5.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 6: Distribution of doctorate recipients by broad field: 1969 and 1999 compared

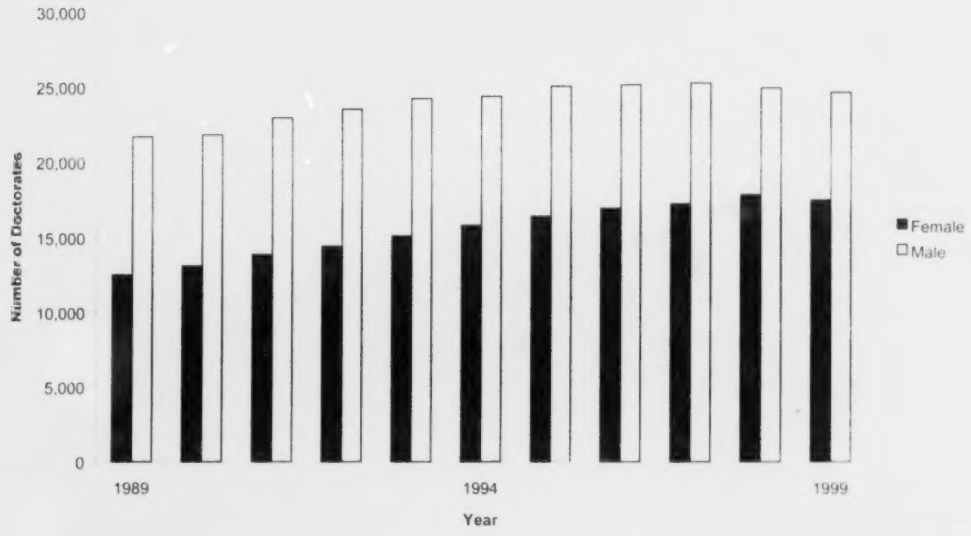


See Table 5.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Doctorates by Sex

The aggregate decrease in doctorates between 1998 and 1999 – 3.6 percent – varied by sex. For males there was a 4.8 percent decline; for females, only a 2.0 percent drop. The numbers of doctorates awarded both to men and to women fell in 1999: 1,193 fewer men and 363 fewer women received doctorates in 1999 than in 1998. The net effect is that for 1999, females received 42.7 percent of all doctorates, up from 42.0 percent in 1998, which had been the highest percentage ever for women.[8] This marks the fourth consecutive year in which the representation of female doctorate recipients has exceeded 40 percent. Five years ago (1994), females constituted 38.7 percent of all doctorate recipients; 10 years ago (1989) that percentage was 36.5 and 25 years ago (1974), it was less than 20 percent (19.5 percent). (See table 7.)

Figure 7: Doctorate recipients by sex, 1989-1999



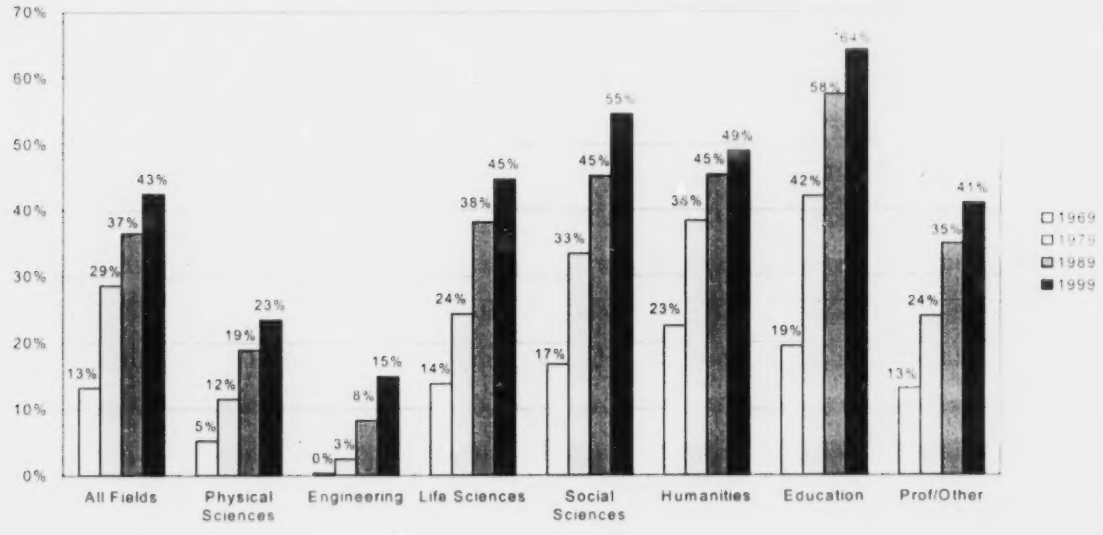
See Table 6.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

[8] For 1999 sex could not be determined for 187 doctorate recipients; these 187 are not part of these and other percentage calculations. In 1998 the corresponding number of cases of undetermined sex was 174.

With respect to the distribution by sex of doctorates across broad fields of study, for 1999 women constituted 64.2 percent of all education doctorates, the majority in the social sciences (54.5 percent), and almost half in the humanities (48.9 percent). By contrast, the representation of females among doctorate recipients in the physical sciences and engineering for 1999 was only 23.4 percent and 14.9 percent, respectively (figure 8). However, even these still-low percentages have shown remarkable change over time: 25 years ago, when females were only 19.5 percent of all doctorate recipients, they constituted 7.7 percent and 1.0 percent in the physical sciences and engineering, respectively. Similar long-term trends are discernible in other broad fields as well: in the life sciences from 18.3 percent in 1974 to 44.7 percent in 1999; 23.5 percent to 54.5 percent in the social sciences over that same period; and from 30.5 percent in the humanities in 1974 to the current 48.9 percent. (See table 7.)

In all seven of the broad fields, the number of doctorates awarded to men was lower in 1999 than in 1998. Females experienced declines in five of the seven broad fields; only in engineering and education were the numbers of doctorates granted to women in 1999 higher than in 1998.

Figure 8: Percent of female doctorate recipients by broad field, 1969, 1979, 1989, 1999



See Table 7.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

In 1999 females represented 36.4 percent of S&E doctorate recipients and 48.2 percent of degrees in non-S&E fields. With respect to finer field distinctions, of the 25 selected subfields listed in table 6, women were the majority of doctorate recipients in 7 fields and constituted at least 40 percent of the doctorate population in 7 more areas. And in 11 of the 25 fields, the rate of increase in female doctorate recipients between 1989 and 1999 was over 40 percent.

While in the aggregate women constituted 42.7 percent of the doctorate recipient population in 1999, that proportion varies not only by field but also by race/ethnicity and citizenship. Among U.S. citizens, of doctorates earned by whites, 47.1 percent were awarded to women; for blacks, various Hispanic groups, and American Indians, women were in the majority, earning between 55 percent and 62 percent of doctorates received by persons of those races or ethnicities. Among Asian Americans, women were only 41.7 percent of the total. (See figure 11 and appendix table A-4.)

For U.S. citizens as a whole, 47.9 percent of all doctorates awarded in 1999 went to women, up from 47.7 percent in 1998 and continuing a long-term trend of U.S. women approaching parity with their male counterparts. For example, in 1979, among U.S. citizens, women earned only 31.0 percent of all doctorates. In fact, the number of male U.S. citizens earning doctorates was more than 3,000 higher in 1979 than it was in 1999, and in the 1990s while the number of doctorates going to U.S. males is relatively level, the number earned by U.S. women has increased every year except 1999. (See appendix tables A-4 and B-2.)

Among permanent residents earning doctorates in 1999, only 40.2 percent were female, and among those doctorate recipients holding temporary visas, only 26.8 percent were female (appendix table A-4). Women holding temporary visas are more concentrated in the S&E fields of study than women who are U.S. citizens. While women with temporary visas represented 13.9 percent of all female doctorates in 1999, they earned 28.4 percent of the doctorates earned by females in the physical sciences, 32.7 percent of the female-earned doctorates in engineering, and 20.9 percent of the doctorates earned by females in the life sciences (appendix table A-3c).

Doctorates by Race/Ethnicity

While the total number of doctorates fell between 1998 and 1999, for U.S. citizens the aggregate number of minority doctorate recipients increased by 5.1 percent. Within race/ethnic categories, Asians and American Indians showed the largest percentage gains, 12.8 percent and

15.9 percent, respectively; the corresponding figure for blacks was 7.6 percent. Hispanics were the only minority group to register a decrease in the number of doctorates in 1999, falling by 7.4 percent. By comparison, the number of white doctorate recipients fell by 1.8 percent. (See appendix table B-22.)

A total of 4,248 doctorates were awarded to members of U.S. racial/ethnic groupings in 1999. This figure is, as noted above, 5.1 percent higher than one year earlier; it is also 38.0 percent higher than the total five years earlier (1994) and nearly double (99.3 percent higher) the number for 1989.

With regard to broad field of study, U.S. minorities received more doctorates in 1999 than in 1998 in five of the seven groupings; in only one area – education – did the number fall; for engineering the 1998 and 1999 totals were identical (see table 8 and *Summary Report 1998* table 8). If 1994 is compared with 1999, two years in which the total numbers of doctorates awarded were virtually the same, minorities registered sizable gains in all seven broad fields, ranging from a 22.6 percent increase in the physical sciences to a 56.4 percent increase in the social sciences. Over that same period, the number of doctorates awarded to whites fell by 3.7 percent. (See table 8.)

Within racial/ethnic grouping, Asians and blacks showed increases in every one of the seven broad fields between 1998 and 1999 (see *Summary Report 1998*, tables 8 and 9, for the 1998 numbers drawn upon here). Hispanics and American Indians registered gains in some fields but declines in others (see table 8). With regard to the 24 subfields listed in table 9, Asians showed absolute increases in 16 of those disciplines, declines in 3, and no change in 5. Blacks showed absolute increases in 15, declines in 7, and no change in 2. By contrast, Hispanics experienced increases in only 10 and decreases in 13, and American Indians gained in 12, declined in 10, and were stable in 2. The number of white graduates declined in 18 of the 24 subfields and increased in only 6.

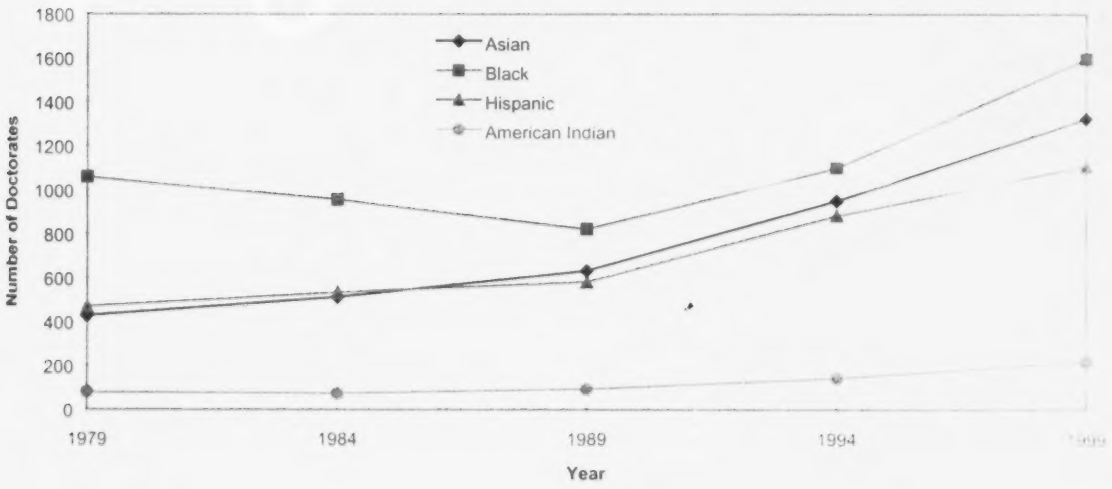
For a breakdown of minority representation by sex, see the previous section.

Table 10 lists the universities that awarded the largest number of doctorates to each of the four minority groupings over the last five years, 1995 through 1999, and the absolute number granted. Over that interval, three California institutions – Berkeley, UCLA, and Stanford – and two in Boston – Harvard and MIT – awarded more than 1,000 doctorates (1,091) to Asian Americans, or 18.1 percent of all doctorates awarded by U.S. universities in that racial category.

Nova Southeastern University and Howard University awarded by far the most doctorates to blacks (290 and 239, respectively), 7.5 percent of the U.S. total. In general, the leading institutions awarding doctorates to Hispanics lie in the Southwest, including California, and in Puerto Rico, and the top 10 account for 22.9 percent of all Hispanic doctorates. Oklahoma State University and the University of Oklahoma grant the largest number of doctorates to American Indians.

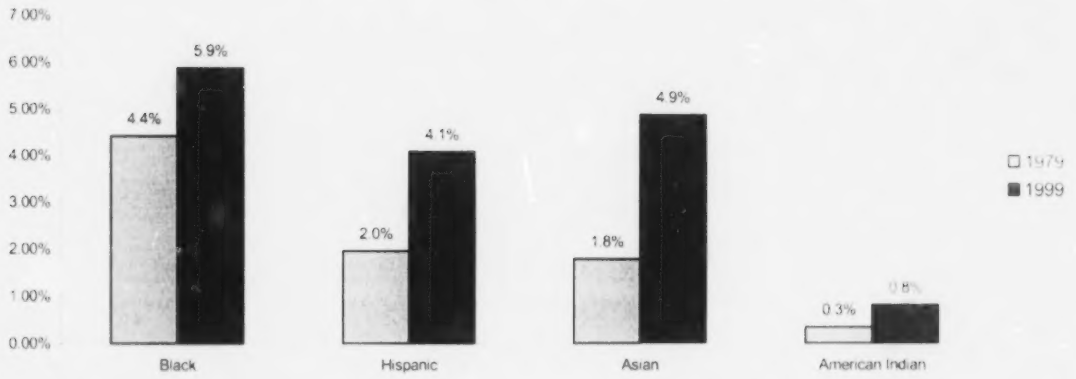
The concentration of U.S. minority doctorate recipients among institutions is considerably greater than for the doctoral population as a whole. In 1999, for example, the leading 10 universities granted 15.6 percent of all doctorates. But over the 1995-99 period, the 10 universities awarding the most degrees to minority students in each of the four groupings accounted for more than 20 percent of those totals. The top 10 institutions that awarded doctorates to Asians in table 10 granted 28.1 percent of all Asian doctorates between 1995 and 1999; for blacks the corresponding figure is 20.7 percent; for Hispanics it was 22.9 percent, and for American Indians it was 20.1 percent.

Figure 9: Doctorates awarded to minority U.S. citizens, by race/ethnicity, 1979-1999



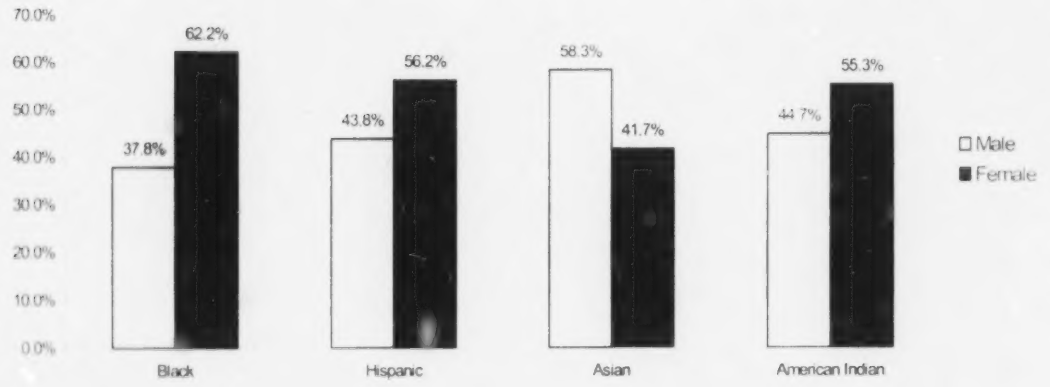
See Table 8.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 10: Percentage of doctorates earned by minority U.S. citizens, 1979 and 1999



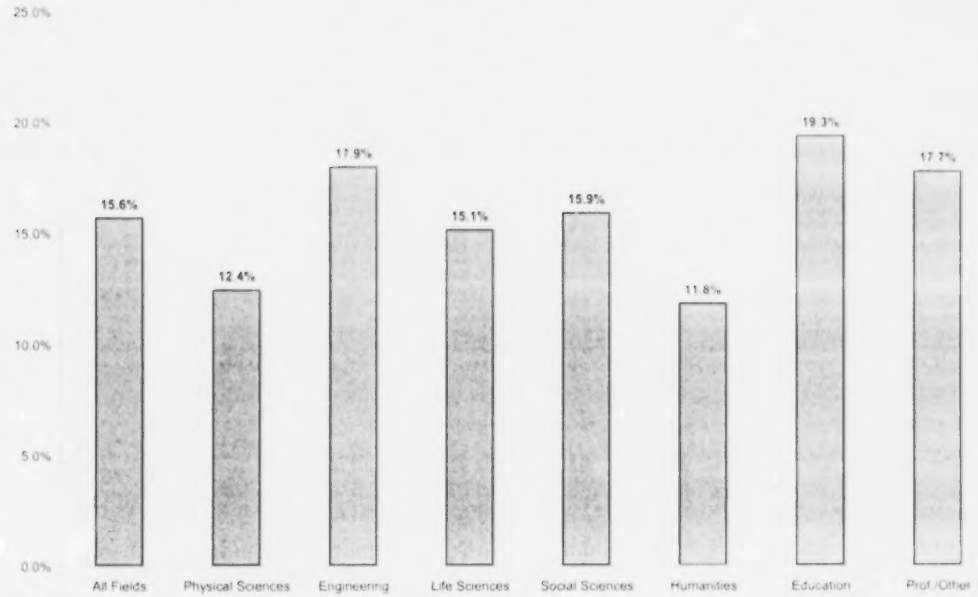
See Table 8.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 11: Percentage of doctorates earned by minority U.S. citizens, by sex, 1999



See Appendix Tables B-2b and B-2c.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Figure 12: Percentage of doctorates earned by minority U.S. citizens, by broad field, 1999



See Table 9.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Doctorates by Citizenship

The SED collects information on the citizenship status and country of citizenship of the new doctorate recipients each year. Of the 1999 doctorate recipients with known citizenship status (94.8 percent of the total), 70.8 percent were U.S. citizens, 5.9 percent were permanent residents of the United States, and 23.3 percent were in the U.S. on temporary visas.[9] See table 11.

[9] Citizenship status (U.S. versus non-U.S.) and country of citizenship are variables with somewhat higher than average non-response in the SED, and the figures presented in this section thus have more uncertainty than others in the report. The numbers of cases with missing data on these variables has also fluctuated more year to year than other SED variables, and the over-time comparisons are thus also subject to some uncertainty. For example, in 1994 citizenship status was unknown for only 734 recipients, but this number rose to 2,651 in 1989 and 1,482 in 1974.

With regard to broad field of study, of the doctoral population with known citizenship status, U.S. citizens earned more than 80 percent of the doctorates awarded in the social sciences, humanities, and education (81.3 percent, 81.8 percent, and 88.6 percent, respectively) in 1999. Permanent residents and those holding temporary visas accounted for the largest proportions in the physical sciences, engineering, and life sciences. (See table 11.) In absolute numbers, U.S. citizens earned more doctorates in education than in any of the other broad fields; permanent residents had their highest total in the life sciences, and for those in the United States on temporary visas, engineering was the most popular field. U.S. citizens showed less field concentration than did non-citizens: three of the seven fields (life sciences, social sciences, and education) accounted for only 57.6 percent of doctorates awarded to U.S. citizens; physical sciences, engineering, and the life sciences accounted for 62.3 percent of doctorates earned by permanent residents, and 71.1 percent of degrees awarded to temporary visa holders.

Citizens of the People's Republic of China (PRC) earned 2,400 doctorates in 1999, or 5.8 percent of the total 41,140 degrees awarded.[10] (See table 12 for a listing of the top 30 countries of origin of all doctorate recipients.) The top 15 countries in terms of the number of doctorates awarded to its citizens in 1998 remained the same for 1999, although Korea moved from fourth to third on the list, changing places with Taiwan (Republic of China), and a few other nations changed modestly in the rankings as well. The leading five countries accounted for 14.5 percent of all doctorates awarded by U.S. universities in 1999. Only 4.8 percent of the total doctoral population are citizens of next 10 nations listed in table 12, and only 2.9 percent are citizens of the next 15 nations. Doctoral students who are citizens of one of the 30 nations shown in the table thus account for 22 percent of the 41,140 doctorates awarded in 1999.

Table 13 lists the institutions awarding the largest numbers of doctorates to non-U.S citizens in 1999; table 14 provides a complementary ranking – those institutions awarding the largest percentage of doctorates relative to the total number of Ph.D.s they granted.

Doctorates by Parental Education Background

Since 1963 the SED has asked new doctorate recipients to report their fathers' and mothers' levels of educational attainment. For purposes here, the responses are grouped into

[10] Hong Kong, with 67 doctorate recipients, is not included in the PRC totals.

three categories: high school diploma or less; some college, including earning the baccalaureate; and advanced degree, including the master's, doctorate, or a professional degree. While only the data for 1999 are described here, analysis of the historical record would be a useful subject for further research on the social origins of the doctorate population.

The 1999 data (see table 15) show that 31.0 percent of recipients' fathers had earned a high school diploma or less; the corresponding figure for their mothers was 40.4 percent. Slightly over one-third (34.5 percent) of doctorate recipients had a father who had gone to college (but may not have earned a baccalaureate degree); 39.4 percent of the mothers of doctorate recipients in 1999 had some college background. Finally, for 34.5 percent of the doctorate recipients, the father held an advanced degree, compared with 20.2 percent whose mothers had an advanced degree.

Although similar in general, parental education backgrounds of male and female 1999 doctorate recipients differed with respect to mothers' education. Female doctorate recipients were more likely than their male counterparts to have a mother who attended college or who earned an advanced degree.

There is considerable variation in parental education attainment by race/ethnicity, citizenship status, and broad field of study. Compared with other racial/ethnic categories, Asian American doctorate recipients were more likely to come from families in which both the father and mother had advanced degrees; black, Hispanic and American Indian recipients' parents were the least likely to have gone beyond high school. U.S. citizen doctorate recipients were more likely than those with either permanent residency status or holding temporary visas to have parents with advanced degrees (and less likely than these two groups to have parents whose formal education did not extend beyond the high school level).

The distributions of parental education by the broad fields in table 15 reflect in part the different sex, race/ethnic, and citizenship compositions of the fields. Doctorate recipients in the humanities displayed the highest percentages of both fathers (43.2 percent) and mothers (25.4 percent) with advanced degrees. Education doctorate recipients had the lowest incidence of advanced degrees by fathers or mothers, 21.1 percent and 11.7 percent, respectively. These two broad fields are also the least and most represented, respectively, with regard to the fraction of parents whose formal education stopped at high school or before.

Time to Degree

The amount of time needed to complete a doctorate is a key concern not only for those pursuing the degree but also for the faculties and administrations of the degree-granting institutions, as well as national public agencies and private organizations that support doctoral study. Time to degree is likely to be affected by individual preferences and economic constraints, as well as by the labor markets and cultures of the academic disciplines and institution-specific program characteristics.

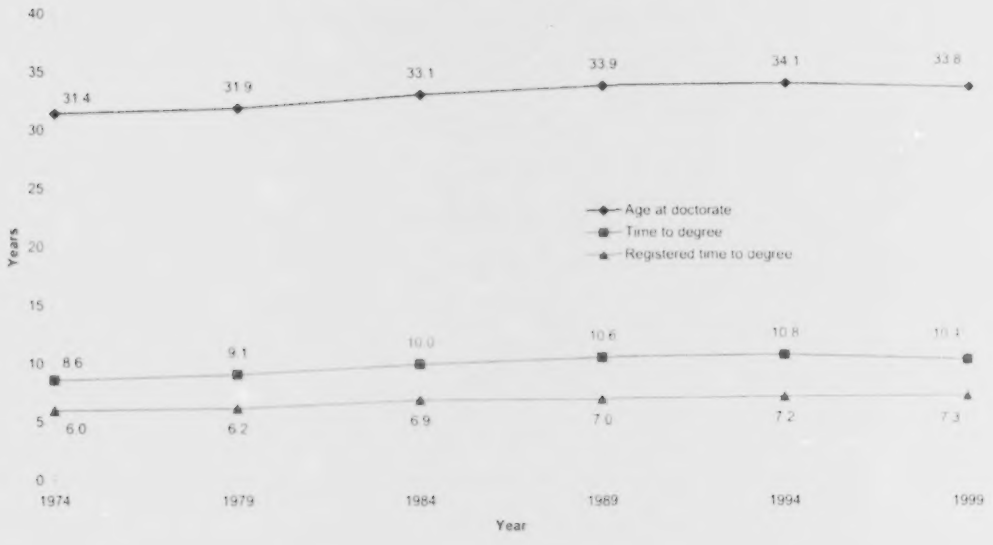
The SED indexes time to degree in three ways: (1) the total time elapsed from completion of the baccalaureate to completion of the doctorate, (2) the total time elapsed while actually registered in graduate school to completion of the doctorate, and (3) the simple age of the doctorate recipients. In this section, the 1999 data and the historical trends for each of these measures is reviewed for the whole population of doctorate recipients and separately by broad field and the background variables of sex, race/ethnicity, and citizenship.

The median total time span from baccalaureate to doctorate for the 1999 doctorate recipients was 10.4 years (table 16), the same as in 1998. The total time span was shortest in the broad area of physical sciences and mathematics (8.0 years) and longest in education (19.9 years) and professional/other fields (14.0 years). These latter two broad fields include large numbers of individuals who have worked full time before starting their graduate degree programs and even continue to work full time while earning their doctorates.

The historical data in table 16 show that the 1999 median total time to degree was about 5 months shorter than in 1994. The longer term trend has been one of increases in length from 1974 to 1994 (see figure 13 and table 16). The broad fields of engineering; physical, life, and social sciences; and humanities follow this overall pattern toward shorter times, but median time to degree for education and the professional/other fields increased from 1994 to 1999.

The median duration of being registered in graduate school was 7.3 years for the 1999 doctorates (table 16), also identical to the number for 1998. Registered time to degree was shortest in engineering (6.6 years) and the physical sciences and mathematics (6.8 years), and longest in the humanities (8.9 years) (table 16). The trend for time registered is one of small but steady increases over the 25-year span from 1974 to 1999 (see figure 13 and table 16) for all seven broad fields, with some flattening in the past five years in all broad fields except the professional/other fields category.

Figure 13: Median number of years to doctorate from baccalaureate award and age at doctorate, 1974-1999



See table 16.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

The median time to degree indices vary somewhat by sex, citizenship, and race/ethnicity, but these differences are mainly reflections of the broad field differences reviewed above (table 17). Across the whole population of new doctorate recipients, females had longer total and registered times to degree than did males, but the sex differences disappear or reverse when males and females are compared within humanities and the physical, life, social sciences. Similar patterns hold for comparisons of U.S. and non-U.S. citizens, and of the U.S. racial/ethnic groups (see table 17).

The third measure of time to degree compiled in the SED is age at doctorate. The median ages of the 1999 doctorate recipients are tabulated in appendix tables A-3 by major field of degree and A-4 by citizenship and race/ethnicity. Overall, the median age at receipt of the doctorate in 1999 was 33.8 years old. Again, age at degree varies with field of study. Doctorate recipients in engineering and the sciences typically earn their degrees in their early 30s; the median for all 1999 doctorate recipients in those broad fields was 31.8 years old. Age at doctorate was 35.1 years in the humanities, 44.3 years in education, and 37.5 years in the

professional/other fields category. The modal age spans evident in figure 14 and table 18 reflect this ordering.

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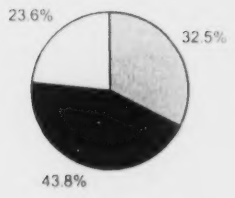
Figure 14: Age distribution at doctorate by broad field of study, 1999

All Fields

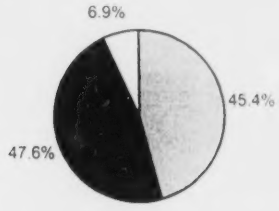


TTD = 10.4 years RTD = 7.3 years

Physical Sciences

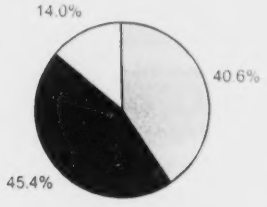
TTD = 8.0 years RTD = 6.8 years

Engineering



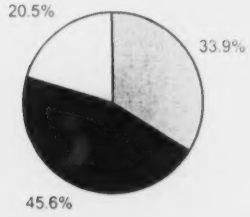
TTD = 8.7 years RTD = 6.6 years

Life Sciences



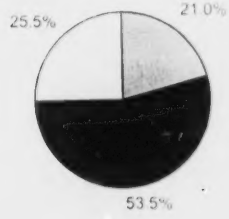
TTD = 9.09 years RTD = 7.0 years

Social Sciences



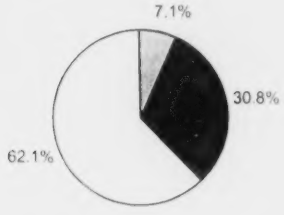
TTD = 9.9 years RTD = 7.5 years

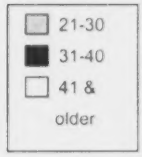
Humanities



TTD = 11.7 years RTD = 8.9 years

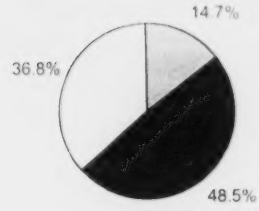
Education





TTD = 19.9 years RTD = 8.2 years

Prof/Other



TTD = 14.0 years RTD = 8.0 years

See Table 18.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Financial Resources in Support of Doctorate Recipients, Including Indebtedness

The SED asks two questions that, taken together, provide information on the financial sources of support utilized by the new doctorate recipients (for the exact formats and wordings, see the copy of the questionnaire in Appendix D). The first question is a checklist of 13 different potential sources of support, such as fellowships and scholarships, dissertation grants, teaching and research assistantships, and various personal arrangements. The second question asks which of the checked sources was the primary source of support and which was the second most important. For purposes here, respondents are grouped in terms of their primary sources of support. The 13 sources are combined into the seven categories that form the rows in table 19.

Well over half—60.9 percent— of the 1999 doctorate recipients received the majority of their support for doctoral study from program- or institution-based sources, such as teaching assistantships, research assistantships/traineeships, and fellowships/dissertation grants.[11] Just under a third (32.6 percent) of all 1999 doctorate recipients reported that their own resources (which include funds from loans, one's spouse, savings, and non-academic employment) were the primary sources they used to finance their doctoral studies. Foreign government, employer contributions, and "other" sources accounted for the remaining 6.5 percent of the cases. (See table 19.)

Overall, women were more dependent upon personal resources than were men (41.2 percent versus 26.1 percent). The same was true for U.S. citizens (40.6 percent) compared to foreign citizens on permanent or temporary visas (22.1 percent and 10.2 percent, respectively). However, sources of support vary considerably by field of study. For example, within engineering, a much higher than average percentage of new doctorate recipients reported program- or institution-based programs as primary sources of support (76.4 percent) and a greater percentage of men than women (13.2 percent versus 9.2 percent) reported their own resources as the primary source of support.

In the physical sciences, 85.6 percent of research doctorate recipients in 1999 listed teaching/research assistantships or fellowships as their principal form of support, as did 76.6 percent of those in the life sciences. By contrast, only 57.5 percent of doctorate recipients in the

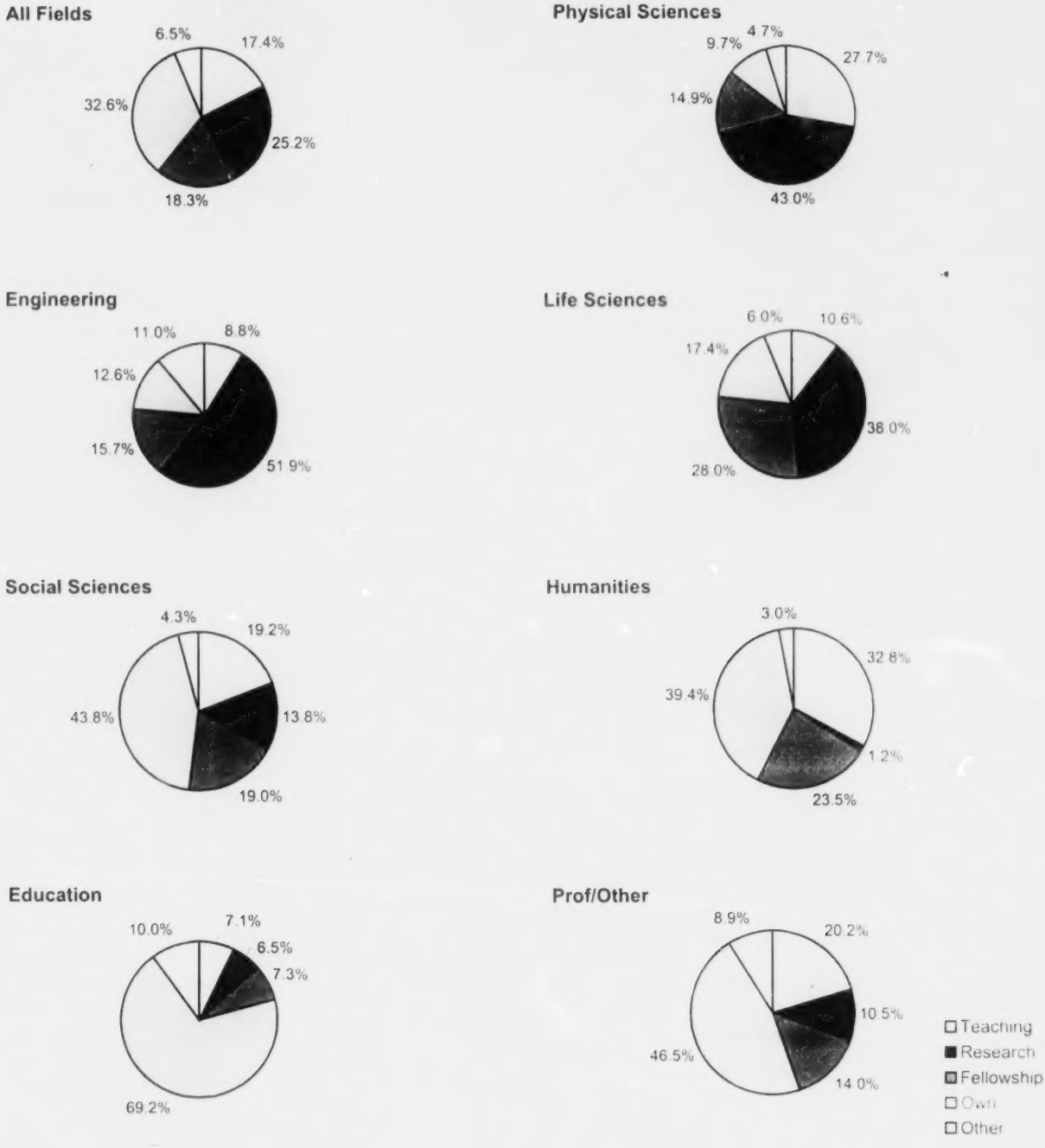
[11] The Federal government and other governments can be the original source of these funds.

humanities, 52.0 percent of those in the social sciences, and 20.9 percent of those in education reported these categories as the primary sources of financial support for their doctoral program. In light of these different patterns in the broad fields of study, aggregate comparisons of graduate sources of financial support among demographic groups should be interpreted cautiously.

Non-U.S. citizens tend to be more concentrated in fields where the majority of doctoral students receive institution- and/or program-based support. Reflecting this concentration, non-U.S. citizens reported lower percentages of reliance on their own resources than did U.S. citizens. This pattern was consistent across all of the broad fields of study.

With regard to race/ethnicity, black doctorate recipients indicated the greatest reliance on their own resources to finance their doctoral program (48.6 percent), followed by American Indians (44.4 percent), whites (41.0 percent), Hispanics (40.7 percent), and Asians (22.7 percent). Within most of the broad fields of study, the race/ethnicity differences in reliance on own resources diminish. Some large race/ethnic differences within fields are found, however, in terms of use of the different types of program- and institution-based supports. In the physical sciences and engineering, Asians and whites were more likely than blacks and Hispanics to rely on teaching and research assistantships and less likely to have fellowships or dissertation grants as their primary source of support.

Figure 15: Primary sources of financial support for doctorate recipients, 1999



See Table 19.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

The SED also asks the new doctorate recipients to indicate the amount of money they owe that is directly tied to their undergraduate or graduate education. This is defined as debt related to tuition and fees, living expenses and supplies, and transportation to and from school. The response categories begin with "none" and proceed upward in $5,000 increments, with "$30,001 or more" at the top. A total of 37,188 (90.4 percent) 1999 graduates responded to the question.

Half (49.9 percent) of the 1999 respondents reported having no education-related debt, and another 24.0 percent reported cumulative debt of $15,000 or less (table 20). However, a distinct bulge at the high end of the debt distribution is also evident, with 13.3 percent of all new doctorate recipients reporting debt over $30,000.

Looking at the debt distributions within each of the seven broad fields, graduates in the physical sciences, engineering, education, and the life sciences are most likely to complete the doctorate with no education-related debt (table 20). Social scientists and humanities graduates are much less likely to have no debt. Debt levels in excess of $30,000 or more are most common among social scientists (24.3 percent), graduates in the professional/other fields areas (17.6 percent), and the humanities (15.5 percent).

The pattern of debt levels for the main demographic groups are shown in table 21. Particularly noteworthy in these tabulations is the much higher probability of blacks, Hispanics, and American Indians to incur high levels of education-related debt. Over a quarter (26.5 percent) of black doctorate recipients, 23.8 percent of American Indians, and 20.4 percent of Hispanics owed more than $30,000; these figures compare to 12.0 percent of Asians and 14.9 percent of whites owing that much. At the other extreme, Asians and whites are much more likely than the other groups to have no education-related debt upon completion of the doctorate.

Postgraduate Plans, Employment, and Location

The SED questionnaire includes a number of questions about the graduates' immediate plans for work or further study.[12] The responses provide a useful overview of the numbers planning to enter academic positions, government and industry, and postdoctoral programs of research and further study. Information is also collected on the main types of work activities -- research, teaching, administration, and professional services to individuals -- that the graduates anticipate in their new positions.

Three aspects of postgraduation plans are examined in this report. The first is whether the new doctorate recipient has a definite or indefinite commitment for employment or a postdoctoral position. These data are examined by broad field of study, sex, citizenship, and race/ethnicity (tables 22 and 23). The second aspect is the distribution of graduates with definite commitments for career employment versus for postdoctorate research and study programs. This distribution is also examined separately by broad field of study, sex, citizenship, and race/ethnicity (tables 24 and 25), as well as by visa status and anticipated location (foreign versus U.S.) for non-U.S. citizens (tables 26 and 27). The third aspect is the distribution of graduates across employment sectors, broken down by sex, race/ethnicity, and citizenship status (table 28).

Definite versus Indefinite Plans

Over two-thirds (69.9 percent) of all doctorate recipients in 1999 reported having definite commitments for employment or postdoctoral study or research. This rate is consistent with those for recent years, but somewhat lower than the rates in the 1980s and 1970s (table 22). With the notable exception of the humanities, the percentages with definite commitments in 1999 vary little by broad field. In the humanities, only 60.6 percent have a definite commitment.

The percentages with definite commitments also differed little among demographic groups (table 23). About 2 percent fewer women than men (68.5 versus 71.0 percent) had

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[12] The items in the postgraduation plans section of the questionnaire are not classified as critical items which become the focus of missing data follow-ups. Thus, the response rates to the postgraduation plans items mirror the returns of the actual questionnaire, minus a low rate of item nonresponse. For the 1998-99 cycle, the overall response rate for the first item, asking whether the respondent has definite plans for either career employment or study, was 90.3 percent.

definite plans. U.S. citizens were more likely to have definite commitments (71.4 percent) than individuals with permanent or temporary visas (66.5 percent). Among U.S. citizens and permanent residents, whites were most likely to have definite plans (72.0 percent), while American Indians, blacks, Asians, and Hispanics were less likely.

Career Employment versus Postdoctorates

Among the doctoral recipients reporting definite plans, the majority (69.8 percent) indicated that they plan to enter career employment as opposed to pursuing further study within a postdoctoral research or teaching program (table 24). Postdoctorate study was more common among graduates in the life sciences (63.8 percent) and the physical sciences (46.5 percent) than in the other broad fields. The percentages of new doctorate recipients entering postdoctorate study programs has increased in all of the broad fields since 1979 (table 24).

Differences among demographic subgroups are evident in table 25. Men were slightly more likely than women to have definite plans for a postdoctorate (32.0 versus 27.5 percent). Students with temporary or permanent visas were much more likely than U.S. citizens to pursue postdoctorate studies (39.3 versus 26.9 percent). Among U.S. citizens and permanent residents, Asian new doctorate recipients were more likely than other race/ethnicity subgroups to plan postdoctorates. Black and American Indian doctorate recipients were least likely to report postdoctorates. These differences among citizenship and race/ethnicity subgroups are reflections of the greater number of postdoctorates in the physical and life sciences, and the greater concentrations of non-U.S. citizens and Asian-American students in those fields.

Postdoctoral Location of Non-U.S. Citizens

As the number of international students earning research doctorates in the United States has steadily increased over the past two decades, so has the tendency for those students to remain in the United States following graduation. Table 26 shows that 91.9 percent of all new doctorate recipients holding permanent visas and 69.4 percent of temporary visa holders indicated that they will remain in the United States following graduation. The fields with the highest concentrations of new doctorate recipients with temporary visas staying in the United States were chemistry (92.3 percent), biology (85.8 percent), physics (76.9 percent), and computer science (76.9 percent) (see table 26).

The trend shown in table 27 is one of increasing percentages of new doctorate recipients with temporary visas planning to stay in the United States after receiving the doctorate. In 1974, 38.2 percent of those on temporary visas had firm commitments to positions in the United States. Twenty-five years later, that number had grown to 67.3 percent.

Employment Sectors in the United States

Higher education remains the most common destination of the 1999 doctorates with definite commitments within the United States, identified by 49.2 percent of the 1999 respondent subpopulation (see table 28). The next largest group, 27.8 percent, had commitments to industry or some form of self-employment, and 7.5 percent planned to work for Federal, state, or local government. The historical trends show reductions in academic and in government employment, coupled with an increase in the industry/self-employment sector.

Among the U.S. racial and ethnic groups, Asians were less likely than others to go immediately into higher education and were more likely than all others to go into industry or self-employment. Industry was also the main destination of non-U.S. citizens with definite plans to remain in the United States after graduation.

Special Section: Interstate Migration Patterns of Doctorate Recipients

Introduction and Overview

Mobility is a vital element in any population and labor force. How willingly families will migrate from one location to another, and how easily workers are able to respond to market signals and make the transition from one opportunity to another -- or to turn a disappointment in one area into a new challenge in another -- for advancement and/or to seek additional training, constitute important indicators and predictors of economic growth and development. From the very beginning of this nation, Americans have exhibited a willingness to move – from settlements and industrial cities in the East to sparsely populated regions, and then from agriculture back to urban areas

On the international front, immigration, including "brain drain" – and "brain gain" concerns, cohort sizes and composition (such as changes in the age, educational or labor force attachments of the new arrivals) are of paramount importance. Domestically, "brain drain" issues are also of particular current interest to individual states across the country, which has implications for allocations for higher education and other public expenditures, as well as other legislative initiatives. Governors, state legislators and others express concern over the loss of their well-educated citizens to other states, or whether they are providing substantial subventions to out-of-state students who then return home – or move elsewhere – after they complete their undergraduate or graduate/professional studies. Support for higher education is occasionally couched in such terms and calculations.

This special section focuses on the extent and pattern of interstate migration of doctorate recipients from United States universities from birth through initial postgraduate employment.[13] This is arguably one of the highest skilled segments of the American labor force, and one for which personal and professional decisions to migrate is of great importance.

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[13] For a recent comprehensive discussion and overview of many international aspects of migration, see *Graduate Education Reform in Europe, Asia and The Americas and International Mobility of Scientists and Engineers: Proceedings of an NSF Workshop*, National Science Foundation, April 2000.

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The Data Set

The Survey of Earned Doctorates (SED) questionnaire (see Appendix D) asks for state of residence information at five points in a respondent's personal event history: (1) state of birth, (2) state in which they received their high school diploma; (3) state where they first enrolled in college; (4) state where they earned their doctorate; and (5) state in which they accepted their initial postdoctorate employment. The data drawn on here are from the 1999 SED.[14]

From the universe of 41,140 doctorate recipients in 1999, we confined our investigation to native-born U.S. citizens who also provided information on where they were born, where they completed high school, where they started college, and where they planned to work after receipt of the doctorate. This yielded a subset of 23,153 individuals, or 89.6 percent of the 25,843 known native-born U.S. citizens earning doctorates in 1999. We used this data set to examine the general pattern and overall level of migration among the new doctorate population, and the extent to which mobility varies by sex, race/ethnicity, marital status, parental education, employment sector, and academic discipline.

From Birth to College

Overall, 13.4 percent of doctorate recipients in our study were born, graduated from high school, entered college, received a doctorate, and planned to work all in the same state. By contrast, 8.7 percent of that same population noted an entirely different state for each of these five chronological markers. (See table 2-1, which also includes these patterns by sex and other characteristics.)

About a third (34.0 percent) of these doctorate recipients were graduated from high school in a state other than the one in which they were born[15] (see table 2-2). Almost the same proportion (36.1 percent) of new recipients first entered college in a state other than the one in which they earned a high school diploma, a figure that is higher than the percentage for college freshmen as a whole.[16] Thus, at the initial undergraduate level, in terms of educational horizons, these doctorate recipients did not resemble their age cohorts (see table 2-2).

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[14] A complementary data set to the SED, the Survey of Doctorate Recipients (SDR), includes information on longitudinal characteristics of doctoral cohorts, including occupational history.

[15] This percentage is a lower bound on migration because it does not capture intrastate moves nor instances in which a family could have moved from one state to another and then back again in this period.

[16] See the *Digest of Education Statistics 1990*, Tables 187, 188, and 189, for data on residence and

From College to Doctoral Study and Employment

More than two-thirds (68.8 percent) of the U.S. citizens receiving doctorates in 1999 received their doctorate from an institution located in a state other than the one in which they first entered college. About half of them – 44.8 percent – intended to remain and work, at least initially, in the state in which they earned their doctorate; 55.2 percent intended to move to another state. (See table 2-2.) With regard to returning to prior "roots," 28.3 percent were returning to (or remaining in) the state in which they went to college, 29.2 percent to the state in which they went to high school, and 24 percent to their birth state (see table 2-3).[17] These percentages imply that there is no single time period in which "brain drain" – or "brain gain" occurs, but rather that migration appears to be more of a continuous process.

Migration and Sex

With respect to demographic characteristics, male and female doctorate recipients exhibited similar migration patterns between birth and graduation from high school, as one would expect (that is, family decision-making with regard to moving should be largely independent of the sex of their child). The same pattern is observed for in-state versus out-of-state college matriculations by sex: 36.5 percent of males and 35.6 percent of females went to college in a state other than the one in which they received their high school diploma. Larger differences by sex begin to appear between college and doctorate institution choices and between doctorate institution location and initial employment: 50.9 percent of females but 59.2 percent of males intended to work in a state different from the one in which they earned the doctorate. (See table 2-2.) Overall, male doctorate recipients were less likely than females to return to the state(s) in which they were born, attended high school, or first matriculated in college. (See table 2-3.)

Migration and Race/Ethnicity

Between birth and high school graduation, Asian American doctorate recipients were more likely to have moved across state lines than other American race/ethnicity groups; 41.9

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migration of all freshmen students in fall 1988. The 1988 class of freshmen is the closest available to the modal year of college entry for the 1999 doctorate recipients (1983).

[17] A 1967 report, *Doctorate Recipients from United States Universities 1958-66* (Publication 1489 National Academy of Sciences, Washington, D.C.), showed that 38.9 percent of doctorate recipients from 1964-66 earned their doctorate in the same state in which they received their high school diploma.

percent of Asians received a diploma in a state other than the one in which they were born compared with 28.2 percent of blacks, 27.1 percent of Hispanics, 34.4 percent of whites, and 33.5 percent of American Indians. Asians, blacks, and whites show more migration between high school and college than do Hispanics and American Indians. Whites are the most likely to move across states between college and doctoral program. (See table 2-2.)

With respect to geographical location for initial postgraduate employment, the similarities are more striking than the differences. However, Hispanics are the most likely of all the racial/ethnic groups to return after the doctorate to the state in they were born, were graduated from high school, or enrolled in college. (See table 2-3.)

Migration and Marital Status

More than three in five (63.9 percent) of doctorate recipients in our subset were married or living in a marriage-like relationship at the time they received the degree; another 7.9 percent were either separated, widowed, or divorced; 28.2 percent had never been married. The "never married" group exhibited a greater tendency to enroll in an out-of-state college (39.7 percent versus 35.0 percent for the married/marriage-like group, and 31.5 percent for the separated/widowed/divorced category), 71.6 percent earned a doctorate in a state other than the one in which they went as an undergraduate (versus 68.0 percent and 64.4 percent, respectively, for other two groups), and 64.3 percent intended to work in a state different from the one in which they earned their terminal degree (versus 51.8 percent and 50.1 percent). (See table 2-2.) Overall, those who had never been married exhibited the lowest tendencies to stay in the state of birth or in which they had gone to high school or college. These differences may reflect a tendency for those without spouses to be less constrained by personal obligations that could affect their willingness to migrate (that is, an employed spouse, children, or other aspects of joint decision-making within the family could lead to more geographic stability); the data are consistent with this hypothesis (see table 2-3).

Migration and Family Background

The SED provides information on the level of educational attainment of doctorate recipients' parents. For present purposes, we segmented recipients into two groups: those from families in which neither parent had received a baccalaureate degree (that is, the highest level of

educational attainment in the family included those with less than a high school diploma, a high school diploma, or some college) and those whose parents had earned a bachelor's degree or higher (36.2 percent and 63.8 percent, respectively). The percentage of doctorate recipients from families with the higher educational backgrounds who graduated from high school in a state other than the one in which they were born than was almost twice the percentage for recipients whose parents' educational attainments were more modest (41.0 percent versus 21.8 percent, respectively). This pattern occurs at the other educational markers in these doctorate recipients' lives: students from more highly educated family backgrounds were more likely to have attended an out-of-state college (42.9 percent versus 24.1 percent), enrolled in college and earned doctorate degrees in different states (72.6 percent versus 62.0 percent), and planned to work in a state other than the one in which they earned the doctorate (58.6 percent versus 49.1 percent). (See table 2-2.) With regard to being employed in a state in which they had earlier roots – birth, high school, or college – doctorate recipients from families with higher levels of formal education exhibited far lower tendencies to return "home." (See table 2-3.)

Migration and Employment

The SED also solicits information on the intended employment sector – academic, government, private industry or "other"[18] – of each new doctorate recipient. There is little difference with respect to interstate migration between birth and high school, from high school to college, or college to doctoral program, or for employment by employment sector, except in the more heterogeneous "other" category, which consistently exhibits less interstate migration than the other three more well-defined employment groupings. (See tables 2-2 and 2-3.)

Migration and Academic Fields of Study

A breakdown of migration across broad academic fields of study – by engineering, the nine science fields, the humanities, and a residual "other" category -- is given in table 2-4. As in table 2-2, the columns contain the percentages of doctorate recipients moving between the two time points described in each column heading. Among the S&E doctorate recipients, students who earned doctorates in the agricultural sciences and chemistry were the least likely to leave their state of birth by high school and college matriculation (29.9 percent and 30.2 percent,

[18] "Other" occupations include working for a non-profit organization, teaching in an elementary or secondary school, or employed by the United Nations or another international agency.

respectively). A similar percentage (28.5 percent) of the doctorate recipients in the heterogeneous "other" field category, two-thirds of which represents doctorate recipients in education,[19] left their state of birth by high school and college matriculation. Those in the "other" fields also were the most likely to enter college and graduate school within the same state.

The third column of numbers in table 2-4 shows the percentages of the 1999 doctorate recipients who earned their doctorates in different states than where they first entered college. These percentages are generally much higher than the rates of out-migration between high school and college entry. The graduates from physics/astronomy and the humanities were the most likely to change states between where they entered college and where they completed the doctorate (77.5 percent and 76.1 percent, respectively). The "other" category, dominated by education doctorate recipients, showed the lowest migration levels between these two points (60.6 percent moved), followed by engineering students (67.2 percent), and psychology (68.7 percent).

With respect to interstate moves between earning the doctorate and place of employment after graduate school, the last column in table 2-4 shows that students whose degrees were in chemistry, physics/astronomy, and social science were the most likely to migrate. In contrast, those in the "other" category were the least likely to find employment in a different state than where they received the doctorate.[20]

Summary and Conclusions

The labor force of doctorate recipients in the United States, as represented by the 1999 cohort, is a highly mobile one. Before they reached their mid-thirties (as noted in an earlier section, the median age at time-to-degree for this cohort was slightly less than 34 years), many of these scholars had moved across state boundaries to attend college, select the doctoral program of their choice, and accept employment. Earlier in life, a third of them graduated from high school in a state other than the one in which they had been born, and more than a third went out

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[19] Sixty-eight (67.8) percent of the 6,578 students in the "other" field grouping are in education; 12.7 percent are in the health sciences, and 19.5 percent in professional fields such as business, communications, and theology.

[20] For a state-by-state and broad field breakdown of doctorate recipients in 1998 who were planning to work in the same state from which they were graduated from high school, see Table 28, page 61, in Sanderson, A., B. Dugoni, T. Hoffer and L. Selfa. 1999. *Doctorate Recipients from United States Universities: Summary Report 1998.* Chicago: National Opinion Research Center.

of their home state for undergraduate studies. Fewer than one in seven doctorate recipients lived, was educated, and planned to be employed professionally in the same state. Upon completion of their doctorate, fewer than one-third planned to return to a state in which they had been born, went to high school, or attended college. Marital status and the educational attainment of these recipients' parents appear to influence migration significantly. The analyses of migration presented in this special section are consistent with those of earlier doctoral cohorts by other researchers and suggest that migration among the doctorate population is both extensive and stable.[21]

[21] A 1991 report, *Migration of U.S. Citizen S/E Doctorate-holders Among States And Regions* (Susan Hill, National Science Foundation), reported that among science and engineering doctorate recipients from 1986-88, 65 percent earned a bachelor's degree in the same state as the state in which they received a high school diploma; 30 percent went to high school and completed their doctoral program in the same state; and 22 percent intended to return to the state where they last attended high school after completion of the doctorate; and 38 percent were going to work or continue postgraduate study in the same state as their doctoral institution. For the 1999 cohort, those S&E percentages were 62.6 percent, 25.8 percent, 25.8 percent, and 40.6 percent, respectively.

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DATA TABLES

1999 SURVEY OF EARNED DOCTORATES

Table 1. Number of doctorates awarded and annual percentage change in doctorates awarded by U.S. colleges and universities, 1957-1999

Year	Number of Ph.D.s	Percent Change*	Year	Number of Ph.D.s	Percent Change*
1957	8,611	1.1	1979	31,239	1.2
1958	8,773	1.9	1980	31,020	-0.7
1959	9,213	5.0	1981	31,356	1.1
1960	9,733	5.6	1982	31,111	-0.8
1961	10,413	7.0	1983	31,281	0.5
1962	11,500	10.4	1984	31,337	0.2
1963	12,728	10.7	1985	31,297	-0.1
1964	14,325	12.5	1986	31,902	1.9
1965	16,340	14.1	1987	32,370	1.5
1966	17,949	9.8	1988	33,500	3.5
1967	20,403	13.7	1989	34,327	2.5
1968	22,937	12.4	1990	36,067	5.1
1969	25,743	12.2	1991	37,534	4.1
1970	29,498	14.6	1992	38,890	3.6
1971	31,867	8.0	1993	39,801	2.3
1972	33,041	3.7	1994	41,034	3.1
1973	33,755	2.2	1995	41,743	1.7
1974	33,047	-2.1	1996	42,415	1.6
1975	32,952	-0.3	1997	42,555	0.3
1976	32,946	0.0	1998	42,683	0.3
1977	31,716	-3.7	1999	41,140	-3.6
1978	30,875	-2.7			

*From previous year.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2. Number of doctorates awarded by U.S. colleges and universities and average doctorate recipients per institution, 1961-1999

Year	Number of Ph.D.s	Number of Institutions	Ph.D.s per Institution	Year	Number of Ph.D.s	Number of Institutions	Ph.D.s per Institution
1961	10,413	174	60	1981	31,356	328	96
1962	11,500	175	66	1982	31,111	333	93
1963	12,728	186	68	1983	31,281	337	93
1964	14,325	196	73	1984	31,337	336	93
1965	16,340	206	79	1985	31,297	342	92
1966	17,949	216	83	1986	31,902	345	92
1967	20,403	220	93	1987	32,370	353	92
1968	22,937	230	100	1988	33,500	355	94
1969	25,743	232	111	1989	34,327	360	95
1970	29,498	242	122	1990	36,067	358	101
1971	31,867	264	121	1991	37,534	367	102
1972	33,041	271	122	1992	38,890	370	105
1973	33,755	290	116	1993	39,801	375	106
1974	33,047	297	111	1994	41,034	377	109
1975	32,952	297	111	1995	41,743	384	109
1976	32,946	299	110	1996	42,415	392	108
1977	31,716	309	103	1997	42,555	382	111
1978	30,875	316	98	1998	42,683	387	110
1979	31,239	316	99	1999	41,140	392	105
1980	31,020	325	95				

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 3. Top 20 doctorate-granting institutions by broad field of doctorate, 1999

Institution	Number of Ph.D.s	Institution	Number of Ph.D.s
All Fields		**Physical Sciences** *	
The University of Texas at Austin	752	University of California-Berkeley	172
University of California-Berkeley	717	Massachusetts Institute of Technology	156
University of Wisconsin-Madison	685	University of Wisconsin-Madison	124
University of Minnesota-Twin Cities	656	The University of Texas at Austin	121
University of Michigan-Ann Arbor	655	University of Illinois at Urbana	118
University of Illinois at Urbana	643	Stanford University	116
University of California-Los Angeles	588	University of Michigan-Ann Arbor	115
Pennsylvania State University-Main Campus	580	University of Maryland-College Park	106
Nova Southeastern University	573	University of Washington	103
Harvard University	564	Texas A & M University	102
Stanford University	551	University of Arizona	102
Ohio State University-Main Campus	549	Cornell University-Endowed Colleges	101
University of Washington	521	University of California-Los Angeles	97
University of Maryland-College Park	504	Purdue University-Main Campus	88
Texas A & M University	501	University of Minnesota-Twin Cities	85
Massachusetts Institute of Technology	487	University of California-San Diego	84
Cornell University-Endowed Colleges	485	Princeton University	83
Purdue University-Main Campus	468	University of Colorado at Boulder	83
University of Southern California	465	Pennsylvania State University-Main Campus	82
University of Florida	447	Harvard University	77
Engineering		**Life Sciences**	
Massachusetts Institute of Technology	194	University of Wisconsin-Madison	178
Stanford University	168	Johns Hopkins University	175
Georgia Institute of Technology-Main Campus	162	University of Minnesota-Twin Cities	175
The University of Texas at Austin	162	Cornell University-Endowed Colleges	159
University of California-Berkeley	149	Harvard University	156
University of Michigan-Ann Arbor	145	University of Washington	143
Pennsylvania State University-Main Campus	142	University of California-Davis	141
Purdue University-Main Campus	136	University of Florida	139
University of Illinois at Urbana	130	University of California-Berkeley	128
North Carolina State University at Raleigh	112	Ohio State University-Main Campus	127
University of Southern California	104	Texas A & M University	124
Texas A & M University	104	University of Illinois at Urbana	121
University of Florida	89	University of North Carolina at Chapel Hill	121
University of Wisconsin-Madison	83	University of Michigan-Ann Arbor	111
University of Maryland-College Park	81	Purdue University-Main Campus	110
University of Colorado at Boulder	80	University of California-Los Angeles	109
Northwestern University	79	University of Arizona	99
University of Minnesota-Twin Cities	79	North Carolina State University at Raleigh	99
Virginia Polytechnic Institute and State Univ	77	University of Georgia	96
Carnegie Mellon University	76	Pennsylvania State University-Main Campus	92

Table 3. Top 20 doctorate-granting institutions by broad field of doctorate, 1999

Institution	Number of Ph.D.s	Institution	Number of Ph.D.s
Social Sciences		**Humanities**	
The University of Texas at Austin	113	Harvard University	146
Harvard University	111	New York University	143
University of Michigan-Ann Arbor	111	University of Chicago	133
University of Chicago	110	Yale University	128
University of Wisconsin-Madison	106	Indiana University-Bloomington	124
University of California-Berkeley	102	University of California-Los Angeles	120
University of Maryland-College Park	100	University of Michigan-Ann Arbor	118
University of California-Los Angeles	99	University of California-Berkeley	115
Columbia University in The City of New York	96	Columbia University in The City of New York	114
University of Illinois at Urbana	91	The University of Texas at Austin	113
Michigan State University	81	University of Minnesota-Twin Cities	107
University of Minnesota-Twin Cities	79	University of Wisconsin-Madison	98
CUNY Graduate School and Univ Center	77	University of Illinois at Urbana	83
University of Georgia	75	University of Washington	78
University of Washington	74	Boston University	77
Ohio State University-Main Campus	73	University of Southern California	75
California School of Prof Psych-San Diego	67	University of Maryland-College Park	74
Cornell University-Endowed Colleges	67	Ohio State University-Main Campus	74
New York University	67	CUNY Graduate School and Univ Center	72
Pennsylvania State University-Main Campus	67	Florida State University	69
Education		**Professional/Other Fields**	
Nova Southeastern University	428	The University of Texas at Austin	51
Teachers College at Columbia University	182	Nova Southeastern University	47
Loyola University of Chicago	119	Virginia Polytechnic Institute and State Univ	39
The University of Texas at Austin	116	University of Southern California	38
Pennsylvania State University-Main Campus	113	New York University	38
Ohio State University-Main Campus	101	Pennsylvania State University-Main Campus	38
Virginia Polytechnic Institute and State Univ	99	Indiana University-Bloomington	35
University of Minnesota-Twin Cities	97	Ohio State University-Main Campus	35
University of Georgia	85	University of Pennsylvania	35
Oklahoma State University-Main Campus	84	Michigan State University	34
Texas A & M University	79	University of Minnesota-Twin Cities	34
University of San Francisco	78	Florida State University	32
University of Southern California	77	Stanford University	32
Arizona State University-Main Campus	73	University of Georgia	30
University of Illinois at Urbana	73	University of Wisconsin-Madison	30
University of California-Los Angeles	72	University of Florida	29
University of Sarasota	70	University of South Carolina at Columbia	28
University of Pittsburgh-Main Campus	70	Walden University	27
University of South Carolina at Columbia	70	University of Illinois at Urbana	27
University of Wisconsin-Madison	66	Massachusetts Institute of Technology	27
		University of Pittsburgh-Main Campus	27

* Includes mathematics and computer sciences.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 4. Number of doctorate recipients by state, including the District of Columbia and Puerto Rico, 1999

Rank	State	Number of Doctorates
1.	California	4,747
2.	New York	3,511
3.	Texas	2,697
4.	Illinois	2,201
5.	Massachusetts	2,132
6.	Pennsylvania	2,115
7.	Florida	1,944
8.	Ohio	1,638
9.	Michigan	1,428
10.	North Carolina	1,105
11.	Indiana	1,057
12.	Virginia	1,026
13.	Maryland	1,006
14.	Georgia	935
15.	Wisconsin	873
16.	New Jersey	822
17.	Minnesota	774
18.	Colorado	754
19.	Arizona	729
20.	Washington	706
21.	Tennessee	667
22.	Missouri	666
23.	Iowa	583
24.	Connecticut	574
25.	Louisiana	557
26.	District of Columbia	524
27.	Alabama	494
28.	Kansas	433
29.	South Carolina	416
30.	Oregon	386
31.	Oklahoma	383
32.	Mississippi	372
33.	Utah	365
34.	Kentucky	317
35.	Nebraska	291
36.	New Mexico	276
37.	Rhode Island	237
38.	Delaware	166
39.	Hawaii	160
40.	Puerto Rico	141
41.	West Virginia	140
42.	Arkansas	121
43.	New Hampshire	97
44.	Nevada	85
45.	Montana	83
46.	Idaho	80
47.	South Dakota	77
48.	North Dakota	68
49.	Wyoming	64
50.	Vermont	53
51.	Maine	37
52.	Alaska	27

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 5. Major field of doctorate recipients for selected years, 1969-1999

Field	1969	1974	1979	1984	1989	1994	1999
All Fields	25,743	33,047	31,239	31,337	34,327	41,039	41,140
Physical Sciences*	5,005	4,976	4,299	4,452	5,455	6,822	6,324
Engineering	3,265	3,147	2,490	2,913	4,543	5,822	5,337
Life Sciences	4,204	4,964	5,223	5,758	6,342	7,739	8,126
Social Sciences	3,984	5,882	5,961	5,929	5,961	6,613	7,036
Humanities	3,788	5,170	4,141	3,536	3,552	4,744	5,468
Education	4,659	7,241	7,385	6,808	6,281	6,708	6,557
Professional/Other Fields	838	1,667	1,740	1,941	2,193	2,586	2,292
Physical Sciences							
Physics & Astronomy	1,461	1,339	1,108	1,080	1,274	1,692	1,431
Chemistry	1,967	1,797	1,566	1,765	1,970	2,257	2,134
Earth, Atmos., & Marine Science	507	629	646	614	740	852	824
Mathematics	1,070	1,211	769	698	859	1,118	1,085
Computer Sciences†	--	--	210	295	612	903	850
Engineering	3,265	3,147	2,490	2,913	4,543	5,822	5,337
Life Sciences							
Biological Sciences	3,092	3,484	3,646	3,880	4,116	5,203	5,600
Health Sciences	297	476	568	722	974	1,296	1,410
Agricultural Sciences	815	1,004	1,009	1,156	1,252	1,240	1,116
Social Sciences							
Psychology	1,766	2,598	3,091	3,257	3,208	3,250	3,667
Anthropology	181	379	383	335	325	384	461
Economics	708	851	802	793	898	939	927
Political Sci./International Rel.	558	909	603	514	524	701	773
Sociology	413	645	632	515	436	525	543
Other Social Sciences	358	500	450	515	570	814	665
Humanities							
History	886	1,186	829	617	538	801	1,011
English Language & Literature	1,029	1,369	909	733	720	943	1,024
Foreign Language & Literature	584	887	646	492	432	594	628
Other Humanities	1,289	1,728	1,757	1,694	1,862	2,406	2,805
Education							
Teacher Education	393	658	492	431	451	401	292
Teaching Fields	1,100	1,479	1,411	1,170	970	960	891
Other Education	3,166	5,104	5,482	5,207	4,860	5,347	5,374
Professional/Other							
Business & Management	516	796	715	869	1,067	1,283	1,104
Communications	38	311	285	255	306	371	379
Other Professional Fields	189	474	717	802	766	891	781
Other Fields	95	86	23	15	54	41	28

* Includes mathematics and computer sciences.
†Computer sciences first appeared on the survey form in 1978.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 6. Doctorate recipients and percent earned by females, by selected subfield, 1989 and 1999

Subfield/Discipline	1989		1999		
	Number of Ph.D.s	Percent Ph.D.s to Females	Number of Ph.D.s	Percent Ph.D.s to Females	Percent Change in Number of Ph.D.s, 1989-1999
Mathematics	859	18.0	1,085	25.5	26.3
Computer Science	612	17.6	850	18.4	38.9
Physics & Astronomy	1,274	9.3	1,431	13.4	12.3
Chemistry	1,970	25.3	2,134	29.7	8.3
Earth, Atmos. & Marine Sci.	740	20.3	824	26.2	11.4
Biochemistry	669	40.1	763	40.6	14.1
Cell Biology	133	42.9	285	47.7	114.3
Ecology	161	22.4	272	44.5	68.9
Molecular Biology	413	37.0	719	41.6	74.1
Microbiology	340	36.5	382	42.7	12.4
Neuroscience	181	34.8	437	41.9	141.4
Health Sciences	974	64.6	1,410	63.9	44.8
Agricultural Sciences	1,252	20.2	1,116	28.6	-10.9
Psychology	3,208	56.1	3,667	66.7	14.3
Anthropology	325	45.5	461	56.6	41.8
Economics	872	19.6	912	27.1	4.6
Political Science & Govt.	430	24.9	653	32.9	51.9
Sociology	436	50.9	543	59.7	24.5
History	538	33.6	1,011	39.6	87.9
Linguistics	188	56.4	250	58.8	33.0
Art History	145	69.0	189	69.8	30.3
Music	521	33.0	769	42.0	47.6
Philosophy	270	24.8	387	24.8	43.3
Language & Literature	1,152	59.4	1,652	59.8	43.4
Business & Management	1,052	26.0	1,104	31.0	4.9

See appendix table A-1.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 7. Number and percent of doctorate recipients, by sex within broad field for selec

Fields		1969 N	1969 %	1974 N	1974 %	1979 N
All Fields	Group Total	25,743	100.0	33,047	100.0	31,239
	Male	22,355	86.8	26,594	80.5	22,302
	Female	3,388	13.2	6,453	19.5	8,937
Physical Sciences§	Group Total	5,005	100.0	4,976	100.0	4,299
	Male	4,743	94.8	4,592	92.3	3,803
	Female	262	5.2	384	7.7	496
Engineering	Group Total	3,265	100.0	3,147	100.0	2,490
	Male	3,255	99.7	3,114	99.0	2,428
	Female	10	0.3	33	1.0	62
Life Sciences	Group Total	4,204	100.0	4,964	100.0	5,223
	Male	3,622	86.2	4,058	81.7	3,952
	Female	582	13.8	906	18.3	1,271
Social Sciences	Group Total	3,984	100.0	5,882	100.0	5,961
	Male	3,317	83.3	4,501	76.5	3,969
	Female	667	16.7	1,381	23.5	1,992
Humanities	Group Total	3,788	100.0	5,170	100.0	4,141
	Male	2,937	77.5	3,594	69.5	2,549
	Female	851	22.5	1,576	30.5	1,592
Education	Group Total	4,659	100.0	7,241	100.0	7,385
	Male	3,753	80.6	5,302	73.2	4,277
	Female	906	19.4	1,939	26.8	3,108
Professional/Other	Group Total	838	100.0	1,667	100.0	1,740
	Male	728	86.9	1,433	86.0	1,324
	Female	110	13.1	234	14.0	416

†Group total for 1994 includes 155 individuals of unknown sex
‡Group total for 1999 includes 187 individuals of unknown sex
§ Includes mathematics and computer sciences

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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ed years, 1969-1999

1984		1989		1994		1999	
%	N	%	N	%	N	%	N	%
100.0	31,337	100.0	34,327	100.0	41,034†	100.0	41,140‡	100.0
71.4	20,638	65.9	21,814	63.5	25,059	61.1	23,460	57.0
28.6	10,699	34.1	12,513	36.5	15,820	38.6	17,493	42.5
100.0	4,452	100.0	5,455	100.0	6,788	100.0	6,295	100.0
88.5	3,795	85.2	4,425	81.1	5,404	79.6	4,821	76.6
11.5	657	14.8	1,030	18.9	1,384	20.4	1,474	23.4
100.0	2,913	100.0	4,543	100.0	5,785	100.0	5,294	100.0
97.5	2,762	94.8	4,168	91.7	5,150	89.0	4,503	85.1
2.5	151	5.2	375	8.3	635	11.0	791	14.9
100.0	5,758	100.0	6,342	100.0	7,710	100.0	8,093	100.0
75.7	3,965	68.9	3,918	61.8	4,489	58.2	4,473	55.3
24.3	1,793	31.1	2,424	38.2	3,221	41.8	3,620	44.7
100.0	5,929	100.0	5,961	100.0	6,585	100.0	7,013	100.0
66.6	3,503	59.1	3,265	54.8	3,317	50.4	3,194	45.5
33.4	2,426	40.9	2,696	45.2	3,268	49.6	3,819	54.5
100.0	3,536	100.0	3,552	100.0	4,733	100.0	5,435	100.0
61.6	1,947	55.1	1,939	54.6	2,470	52.2	2,777	51.1
38.4	1,589	44.9	1,613	45.4	2,263	47.8	2,658	48.9
100.0	6,808	100.0	6,281	100.0	6,699	100.0	6,540	100.0
57.9	3,337	49.0	2,671	42.5	2,610	39.0	2,344	35.8
42.1	3,471	51.0	3,610	57.5	4,089	61.0	4,196	64.2
100.0	1,941	100.0	2,193	100.0	2,579	100.0	2,283	100.0
76.1	1,329	68.5	1,428	65.1	1,619	62.8	1,348	59.0
23.9	612	31.5	765	34.9	960	37.2	935	41.0

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Table 8. Number of U.S. citizen doctorate recipients, by race/ethnicity within broad field for selected years, 1979-1999

Field	Race/Ethnicity	1979	1984	1989	1994	1999
All Fields	Group Total	25,474	24,046	23,402	27,147	27,622
	Known Race/Ethnicity	23,961	23,457	23,026	26,894	27,177
	Asian*	428	513	633	950	1,324
	Black	1,058	956	822	1,101	1,596
	Hispanic	470	534	582	884	1,109
	American Indian†	81	74	94	143	219
	White	21,924	21,380	20,895	23,816	22,929
Physical Sciences‡	Group Total	3,287	3,131	3,233	3,635	3,443
	Known Race/Ethnicity	3,042	3,026	3,149	3,601	3,371
	Asian*	77	106	118	180	216
	Black	48	35	35	52	91
	Hispanic	37	53	70	99	93
	American Indian†	4	7	18	10	18
	White	2,876	2,825	2,908	3,260	2,953
Engineering	Group Total	1,293	1,240	1,864	2,215	2,474
	Known Race/Ethnicity	1,189	1,195	1,821	2,187	2,415
	Asian*	69	95	174	202	266
	Black	17	12	24	44	84
	Hispanic	15	22	33	49	71
	American Indian†	3	3	7	6	12
	White	1,085	1,063	1,583	1,886	1,982
Life Sciences	Group Total	4,199	4,569	4,534	4,954	5,121
	Known Race/Ethnicity	3,946	4,449	4,453	4,905	5,047
	Asian*	105	133	140	246	361
	Black	62	75	77	120	178
	Hispanic	43	54	82	147	195
	American Indian†	3	12	12	24	28
	White	3,733	4,175	4,142	4,368	4,285
Social Sciences	Group Total	5,076	4,787	4,307	4,991	5,352
	Known Race/Ethnicity	4,787	4,686	4,250	4,939	5,278
	Asian*	64	67	71	132	188
	Black	189	195	170	200	311
	Hispanic	88	127	130	176	278
	American Indian†	17	10	18	27	60
	White	4,429	4,287	3,861	4,404	4,441
Humanities	Group Total	3,653	2,965	4,724	3,716	4,267
	Known Race/Ethnicity	3,437	2,886	2,668	3,682	4,188
	Asian*	45	28	42	68	126
	Black	118	95	72	102	172
	Hispanic	109	98	84	138	170
	American Indian†	10	5	7	23	25
	White	3,155	2,660	2,463	3,351	3,695
Education	Group Total	6,572	5,917	5,246	5,864	5,429
	Known Race/Ethnicity	6,250	5,822	5,206	5,819	5,360
	Asian*	54	61	57	81	103
	Black	560	487	390	486	621
	Hispanic	165	146	158	226	252
	American Indian†	40	33	25	37	60
	White	5,431	5,095	4,576	4,989	4,324
Professional/Other	Group Total	1,394	1,437	1,494	1,772	1,536
	Known Race/Ethnicity	1,310	1,393	1,479	1,761	1,518
	Asian*	14	23	31	41	64
	Black	64	57	54	97	139
	Hispanic	13	34	25	49	50
	American Indian†	4	4	7	16	16
	White	1,215	1,275	1,362	1,558	1,249

*Includes Pacific Islander
†Includes Alaskan Native
‡Includes mathematics and computer sciences

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 9. Major field of U.S. citizen doctorate recipients by race/ethnicity, 1999

Field	Total U.S. Citizen Ph.D.s	Number with Known Race/ Ethnicity	U.S. Citizens and Permanent Residents				
			Asian*	Black	Hispanic	American Indian†	White
All Fields	27,622	27,177	1,324	1,596	1,109	219	22,929
Physical Sciences‡	3,443	3,371	216	91	93	18	2,953
Physics & Astronomy	761	742	36	8	13	5	680
Chemistry	1,251	1,233	92	46	38	5	1,052
Earth, Atmos., & Marine Science	481	468	15	11	18	6	418
Mathematics	538	528	31	10	12	1	474
Computer Sciences	412	400	42	16	12	1	329
Engineering	2,474	2,415	266	84	71	12	1,982
Life Sciences	5,121	5,047	361	178	195	28	4,285
Biological Sciences	3,654	3,599	297	109	145	20	3,028
Health Sciences	966	954	43	51	39	6	815
Agricultural Sciences	501	494	21	18	11	2	442
Social Sciences	5,352	5,278	188	311	278	60	4,441
Psychology	3,161	3,136	107	169	192	36	2,632
Economics	400	392	19	21	17	1	334
Anthropology & Sociology	766	750	26	55	33	12	624
Poli. Sci./Int'l Relations	573	555	17	32	21	6	479
Other Social Sciences	452	445	19	34	15	5	372
Humanities	4,267	4,188	126	172	170	25	3,695
History	850	825	27	28	23	4	743
Amer. & Eng. Lang. & Literature	884	874	19	37	33	2	783
Foreign Lang. & Lit.	406	396	17	16	53	3	307
Other Humanities	2,127	2,093	63	91	61	16	1,862
Education	5,429	5,360	103	621	252	60	4,324
Teacher Education	244	240	5	30	8	2	195
Teaching Fields	701	691	14	52	26	9	590
Other Education	4,484	4,429	84	539	218	49	3,539
Professional/Other	1,536	1,518	64	139	50	16	1,249
Business & Management	696	689	32	54	13	5	585
Other Professional Fields	833	823	32	84	36	11	660
Other Fields	7	6		1	1		4

NOTE: See technical notes in appendix C for the rate of nonresponse to the survey question on race/ethnicity.

*Asian includes Pacific Islander.
†American Indian includes Alaskan Native.
‡Includes mathematics and computer sciences.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 10. Leading doctorate-granting institutions of U.S. minority doctorate recipients, 1995-1999

Institution	Number of Ph.D.s	Institution	Number of Ph.D.s
Asian*		**Black**	
University of California-Berkeley	317	Nova Southeastern University	290
University of California-Los Angeles	285	Howard University	239
Stanford University	203	University of Michigan-Ann Arbor	143
Massachusetts Institute of Technology	145	Ohio State University-Main Campus	131
Harvard University	141	University of Maryland-College Park	122
University of Michigan-Ann Arbor	132	Virginia Polytechnic Institute and State Univ	122
University of Illinois at Urbana	123	Wayne State University	114
University of California-Davis	120	Teachers College at Columbia University	101
Columbia University in The City of New York	117	Florida State University	98
University of Southern California	111	Temple University	96
University of Washington	94	North Carolina State University at Raleigh	95
Purdue University-Main Campus	92	Clark Atlanta University	92
University of California-Irvine	81	University of Illinois at Urbana	92
Northwestern University	81	University of North Carolina at Chapel Hill	85
University of Pennsylvania	81	Michigan State University	83
University of Maryland-College Park	79	The University of Texas at Austin	78
New York University	79	Walden University	77
University of Wisconsin-Madison	79	University of Pennsylvania	77
The University of Texas at Austin	77	University of California-Los Angeles	76
University of California-San Diego	74	University of South Carolina at Columbia	76
Top 20 Institutions	*2,511*	*Top 20 Institutions*	*2,289*
Total Institutions Reported (318)	*6,039*	*Total Institutions Reported (314)*	*7,048*
Hispanic		**American Indian†**	
The University of Texas at Austin	189	Oklahoma State University-Main Campus	29
University of Puerto Rico-Rio Piedras Campus	162	University of Oklahoma Norman Campus	20
University of California-Berkeley	152	University of California-Los Angeles	18
Carlos Albizu University-San Juan Campus	143	Pennsylvania State University-Main Campus	18
University of California-Los Angeles	118	University of Washington	18
Texas A & M University	105	University of Arkansas at Fayetteville	17
Arizona State University-Main Campus	84	University of Michigan-Ann Arbor	15
Harvard University	84	Stanford University	15
University of Michigan-Ann Arbor	79	University of Arizona	14
Stanford University	79	University of Minnesota-Twin Cities	13
University of New Mexico-Main Campus	77	North Carolina State University at Raleigh	13
University of Arizona	76	The University of Texas at Austin	13
University of Southern California	72	University of Georgia	12
University of Miami	72	Nova Southeastern University	11
Pennsylvania State University-Main Campus	70	University of Maryland-College Park	11
University of Wisconsin-Madison	67	University of New Mexico-Main Campus	11
University of California-Davis	66	University of North Dakota-Main Campus	11
Nova Southeastern University	63	University of Wisconsin-Madison	11
New York University	62	Arizona State University-Main Campus	10
University of California-Santa Barbara	58	University of California-Berkeley	10
University of Florida	58	University of California-Santa Barbara	10
		Michigan State University	10
		Ohio State University	10
		Purdue University	10
Top 20 Institutions	*1,936*	*Top 20 Institutions*	*909*
Total Institutions Reported (310)	*5,218*	*Total Institutions Reported (225)*	*336*

*Includes Pacific Islander
†Includes Alaskan Native

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 11. Citizenship status of doctorate recipients by broad field for selected years, 1969-1999

Field/Citizenship	1969	1974	1979	1984	1989	1994	1999
Total	25,743	33,047	31,239	31,337	34,327	41,034	41,140
All Fields							
U.S. Citizen	21,542	26,380	25,474	24,046	23,402	27,147	27,622
Non-U.S., Permanent Visa	1,235	1,826	1,320	1,224	1,626	3,747	2,300
Non-U.S., Temporary Visa	2,334	3,359	3,587	4,832	6,648	9,406	9,068
Unknown	632	1,482	858	1,235	2,651	734	2,150
Physical Sciences*							
U.S. Citizen	4,115	3,676	3,287	3,131	3,233	3,635	3,443
Non-U.S., Permanent Visa	252	375	262	197	269	967	429
Non-U.S., Temporary Visa	527	738	667	991	1,536	2,095	2,146
Unknown	111	187	83	133	417	125	306
Engineering							
U.S. Citizen	2,387	1,757	1,293	1,240	1,864	2,215	2,474
Non-U.S., Permanent Visa	349	515	322	274	365	838	399
Non-U.S., Temporary Visa	460	704	815	1,269	1,940	2,653	2,193
Unknown	69	171	60	130	374	116	271
Life Sciences							
U.S. Citizen	3,334	3,693	4,199	4,569	4,534	4,954	5,121
Non-U.S., Permanent Visa	200	320	208	193	264	871	605
Non-U.S., Temporary Visa	617	727	683	821	[illegible]	[illegible]	[illegible]
Unknown	53	224	133	175	392	82	291
Social Sciences							
U.S. Citizen	3,400	4,869	5,076	4,787	4,307	4,991	5,352
Non-U.S., Permanent Visa	159	213	181	194	227	392	258
Non-U.S., Temporary Visa	327	520	506	635	824	1,046	969
Unknown	98	280	198	313	603	184	457
Humanities							
U.S. Citizen	3,373	4,524	3,653	2,965	2,724	3,716	4,267
Non-U.S., Permanent Visa	167	224	157	145	210	316	309
Non-U.S., Temporary Visa	140	216	200	252	346	630	640
Unknown	108	206	131	174	272	82	252
Education							
U.S. Citizen	4,266	6,568	6,572	5,917	5,246	5,864	5,429
Non-U.S., Permanent Visa	70	102	117	130	164	199	148
Non-U.S., Temporary Visa	191	302	481	540	452	537	519
Unknown	132	269	215	221	419	108	429
Professional/Other							
U.S. Citizen	667	1,293	1,394	1,437	1,494	1,772	1,536
Non-U.S., Permanent Visa	38	77	73	91	127	164	120
Non-U.S., Temporary Visa	72	152	235	324	398	513	430
Unknown	61	145	38	89	174	57	144

*Includes mathematics and computer sciences.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 12. Top 30 countries of origin of non-U.S. citizens earning doctorates at U.S. colleges and universities, 1999 (ranked by number of earned doctorates)

Country	Number of Ph.D.s	Country	Number of Ph.D.s
1. China, Peoples Republic of	2,400	16. Iran	103
2. India	1,077	17. Italy	102
3. Korea	1,017	18. Romania	101
4. China, Republic of (Taiwan)	981	19. Spain	100
5. Canada	473	20. Jordan	84
6. Germany	266	21. Venezuela	80
7. Japan	238	22. Australia	75
8. Russia	231	23. Egypt	73
9. Turkey	224	24. Saudi Arabia	71
10. Great Britain, UK	215	25. Yugoslavia	67
11. Brazil	205	25. Hong Kong	67
12. Mexico	191	25. Pakistan	67
13. Thailand	181	28. Indonesia	64
14. Greece	117	28. Argentina	64
15. France	110	30. Malaysia	63
		Top 30	*9,107*
		Non-U.S. Citizens Earning Ph.D.s	*11,368*

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 13. Leading doctorate-granting institutions of non-U.S. citizen doctorate recipients, 1999 (ranked by number of earned doctorates)

Institution	Number of Ph.D.s	Institution	Number of Ph.D.s
University of Illinois at Urbana	243	University of Southern California	179
Ohio State University-Main Campus	237	University of Florida	175
The University of Texas at Austin	230	University of Maryland-College Park	173
Purdue University-Main Campus	221	Stanford University	169
University of Wisconsin-Madison	212	University of California-Berkeley	157
University of Minnesota-Twin Cities	204	Columbia University in The City of New York	155
Texas A & M University	199	Michigan State University	151
University of Michigan-Ann Arbor	192	Rutgers University-New Brunswick	149
Cornell University-Endowed Colleges	188	University of California-Los Angeles	142
Pennsylvania State Univ-Main Campus	182	Harvard University	130
		Top 20 institutions	*3,688*
		Total Institutions Reported (392)	*11,368*

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 14. Leading doctorate-granting institutions of non-U.S. citizen doctorate recipients, 1999 (ranked by percentage of earned doctorates*)

Institution	Percent of Ph.D.s†	Institution	Percent of Ph.D.s†
New Jersey Institute of Technology	79.5	SUNY At Buffalo	48.0
Stevens Institute of Technology	72.2	Iowa State University	47.9
Clarkson University	68.4	Purdue University-Main Campus	47.2
Rockefeller University	61.1	Carnegie Mellon University	46.9
Illinois Institute of Technology	60.9	Oregon State University	46.3
Polytechnic University	60.7	Northeastern University	46.3
Michigan Technological University	58.3	North Dakota State University Main Campus	46.2
University of Missouri-Rolla	56.8	University of Maryland-Baltimore County	45.6
Rutgers University-Newark	54.3	Mississippi State University	45.5
University of Massachusetts-Lowell	50.0	University of Akron Main Campus	45.4

*The ranking excludes institutions with fewer than 10 non-U.S. citizen doctorate recipients.
†The percent column is based on the number of non-U.S. citizens as a percentage of the total doctorates awarded by that institution.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 15. Parental educational attainment of 1999 doctorate recipients

	Percent High School or Less	Percent College	Percent Advanced Degree	Total Percent	Total Number
Total					
Father's Education	31.0	34.5	34.5	100.0	37,133
Mother's Education	40.4	39.4	20.2	100.0	37,251
Sex					
Male					
Father's Education	31.4	34.5	34.1	100.0	21,313
Mother's Education	42.2	38.4	19.4	100.0	21,375
Female					
Father's Education	30.5	34.6	34.9	100.0	15,818
Mother's Education	37.8	40.9	21.3	100.0	15,874
Race/Ethnicity (U.S. citizens only)					
Asian*					
Father's Education	23.1	31.8	45.0	100.0	1,270
Mother's Education	35.6	38.4	26.0	100.0	1,274
Black					
Father's Education	54.6	27.2	18.2	100.0	1,476
Mother's Education	49.2	32.2	18.6	100.0	1,507
Hispanic					
Father's Education	45.8	27.3	26.9	100.0	1,012
Mother's Education	53.0	31.9	15.1	100.0	1,021
American Indian†					
Father's Education	54.1	26.0	19.9	100.0	196
Mother's Education	53.8	32.2	14.1	100.0	199
White					
Father's Education	26.6	34.4	39.0	100.0	22,125
Mother's Education	33.0	43.8	23.1	100.0	22,180
Citizenship					
U.S. Citizen					
Father's Education	28.9	33.5	37.6	100.0	26,419
Mother's Education	35.0	42.4	22.7	100.0	26,523
Non-U.S., Permanent Visa					
Father's Education	35.9	35.3	28.8	100.0	2,197
Mother's Education	49.8	33.7	16.6	100.0	2,199
Non-U.S., Temporary Visa					
Father's Education	36.5	37.3	26.2	100.0	8,471
Mother's Education	54.8	31.8	13.4	100.0	8,483
Broad Field of Study					
Physical Sciences‡					
Father's Education	25.6	35.6	38.8	100.0	5,758
Mother's Education	35.6	40.8	23.6	100.0	5,779
Engineering					
Father's Education	26.6	40.1	33.3	100.0	4,843
Mother's Education	41.8	39.6	18.6	100.0	4,849
Life Sciences					
Father's Education	29.1	35.6	35.3	100.0	7,515
Mother's Education	38.7	40.9	20.3	100.0	7,529
Social Sciences					
Father's Education	28.0	34.0	38.0	100.0	6,228
Mother's Education	35.6	41.0	23.4	100.0	6,239
Humanities					
Father's Education	25.4	31.4	43.2	100.0	4,962
Mother's Education	32.8	41.8	25.4	100.0	4,992
Education					
Father's Education	49.0	30.0	21.1	100.0	5,827
Mother's Education	55.2	33.1	11.7	100.0	5,857
Professional/Other Fields					
Father's Education	35.8	36.2	28.1	100.0	2,000
Mother's Education	46.9	37.4	15.8	100.0	2,006

*Includes Pacific Islander
†Includes Alaskan Native
‡Includes mathematics and computer sciences

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 16. Median number of years from baccalaureate to doctorate award by broad field for selected years, 1974-1999

Field	1974	1979	1984	1989	1994	1999
All Fields						
Total	8.6	9.1	10.0	10.6	10.8	10.4
Registered	6.0	6.2	6.9	7.0	7.2	7.3
Physical Sciences*						
Total	6.9	6.9	7.3	7.5	8.5	8.0
Registered	5.7	5.9	6.0	6.2	6.7	6.8
Engineering						
Total	7.7	7.6	8.0	8.2	9.0	8.7
Registered	5.7	5.7	5.9	6.1	6.4	6.6
Life Sciences						
Total	7.3	7.4	8.3	9.2	9.5	9.0
Registered	5.6	5.9	6.3	6.7	7.0	7.0
Social Sciences						
Total	7.9	8.5	9.8	10.5	10.4	9.9
Registered	5.9	6.3	7.1	7.5	7.5	7.5
Humanities						
Total	9.4	10.3	11.6	12.6	12.0	11.7
Registered	6.7	7.6	8.3	8.5	8.5	8.9
Education						
Total	12.5	12.9	14.8	17.3	19.7	19.9
Registered	6.3	6.7	7.7	8.2	8.1	8.2
Professional/Other						
Total	10.0	10.9	12.3	13.3	13.5	14.0
Registered	6.0	6.3	7.2	7.6	7.5	8.0

*Includes mathematics and computer sciences.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 17. Median number of years from baccalaureate to doctorate award, by demographic group and broad field, 1999

	All Fields	Physical Sciences*	Engineering	Life Sciences	Social Sciences	Humanities	Education	Prof./ Other
Elapsed Time from Baccalaureate (years)								
All Ph.D.s	10.4	8.0	8.7	9.0	9.9	11.7	19.9	14.0
Sex								
Male	10.0	8.0	8.9	9.0	10.0	11.8	18.3	13.6
Female	11.3	7.9	8.0	9.0	9.8	11.6	20.5	14.8
Citizenship								
U.S. Citizen	10.7	7.2	8.0	8.5	9.7	11.8	20.9	15.4
Non-U.S., Permanent Visa	11.4	10.1	10.6	11.0	11.8	12.2	15.0	13.0
Non-U.S., Temporary Visa	9.8	8.9	9.1	9.9	10.0	11.0	13.0	11.0
Race/Ethnicity (U.S. citizens only)								
Asian†	8.5	7.6	7.6	7.9	9.0	11.0	15.0	12.8
Black	13.7	7.9	9.3	10.0	9.9	12.2	21.6	16.0
Hispanic	11.2	8.0	7.9	8.9	9.7	11.7	18.8	14.5
American Indian‡	13.0	9.6	10.7	10.0	10.0	14.9	20.5	19.3
White	10.6	7.0	8.0	8.5	9.7	11.7	21.0	15.5
Registered Time from Baccalaureate (years)								
All Ph.D.s	7.3	6.8	6.6	7.0	7.5	8.9	8.2	8.0
Sex								
Male	7.3	6.8	6.7	7.0	7.6	8.9	8.1	8.0
Female	7.6	6.6	6.3	7.0	7.5	8.9	8.2	8.0
Citizenship								
U.S. Citizen	7.5	6.6	6.5	7.0	7.5	9.0	8.4	8.1
Non-U.S., Permanent Visa	8.0	7.5	7.5	7.8	8.2	9.4	8.0	8.8
Non-U.S., Temporary Visa	7.0	7.0	6.6	7.0	7.5	8.1	6.9	7.5
Race/Ethnicity (U.S. citizens only)								
Asian†	7.0	7.0	6.7	6.6	7.2	9.0	7.6	8.0
Black	7.9	6.8	7.0	7.6	7.4	8.9	8.0	7.6
Hispanic	7.9	7.3	6.7	7.3	7.6	8.5	9.0	8.1
American Indian‡	8.2	6.8	8.9	8.0	8.0	10.0	9.0	8.9
White	7.5	6.5	6.5	6.9	7.5	9.0	8.4	8.2

*Includes mathematics and computer sciences
†Includes Pacific Islander.
‡Includes Alaskan Native.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 18. Distribution of 1999 doctorate recipients by age at doctorate

Field of Study	Median age at Doctorate	Age Grouping					
		21-25	26-30	31-35	36-40	41-45	Over 45
All Fields	33.8	241	12,466	11,214	5,906	3,731	5,489
Broad Field							
Physical Sciences*	30.7	88	3,074	1,761	654	265	143
Engineering	31.4	68	2,211	1,649	739	216	132
Life Sciences	32.1	36	3,140	2,470	1,079	579	512
Social Sciences	33.2	27	2,216	2,026	988	610	747
Humanities	35.1	7	1,084	1,751	1,035	589	738
Education	44.3	8	436	963	976	1,145	2,762
Prof/Other Fields	37.5	7	305	594	435	327	455
Sex							
Male	33.2	166	7,559	7,026	3,579	1,955	2,092
Female	34.7	75	4,905	4,187	2,327	1,776	3,397
Citizenship							
U.S. Citizen	34.2	137	8,858	6,697	3,854	2,900	4,936
Permanent Visa	34.6	11	492	885	510	233	147
Temporary Visa	32.7	86	3,034	3,557	1,476	545	250
Unknown	40.0	7	82	75	66	53	156
Race/Ethnicity (U.S. citizens only)							
Asian†	31.1	15	619	347	160	73	90
Black	38.6	8	341	308	234	220	468
Hispanic	35.1	2	312	277	179	144	183
American Indian‡	39.7	0	36	49	36	34	61
White	34.1	108	7,444	5,628	3,192	2,385	4,062

*Includes mathematics and computer sciences.
†Includes Pacific Islander.
‡Includes Alaskan Native.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 19. Primary sources of financial support for doctorate recipients by broad field and demographic group, 1999 (includes only doctorate recipients who reported primary source of support)

Primary Source of Support		Total	Sex		Citizenship			U.S Citizens and Permanent Residents				
			Male	Female	U.S Citizen	Permanent Visa	Temporary Visa	Asian*	Black	Hispanic	American Indian†	White
All Fields	N	36,934	21,241	15,690	26,322	2,157	8,391	1,253	1,486	1,003	198	22,020
Teaching Assistantships	%	17.4	18.1	16.5	16.0	21.3	20.7	14.0	7.5	12.3	9.6	17.0
Research Assistantships/Traineeships	%	25.2	30.2	18.4	19.6	33.7	40.6	31.8	7.9	12.4	16.7	20.1
Fellowships/Dissertation Grants	%	18.3	17.9	18.8	18.8	17.2	17.0	27.1	29.9	30.1	24.7	16.9
Own Resources	%	32.6	26.1	41.2	40.6	22.1	10.2	22.7	48.6	40.7	44.4	41.0
Foreign Government	%	2.7	3.5	1.6	0.2	3.2	10.3	1.1	0.3	0.6	1.5	0.1
Employer	%	3.3	3.6	3.0	4.1	2.3	1.1	2.7	4.8	3.9	2.5	4.2
Other	%	0.5	0.6	0.5	0.7	0.3	0.1	0.6	1.0	0.1	1.0	0.7
Physical Sciences‡	N	5,769	4,405	1,363	3,323	409	2,019	206	85	90	14	2,866
Teaching Assistantships	%	27.7	27.9	27.1	24.4	33.0	32.1	22.8	12.9	16.7	21.4	25.2
Research Assistantships/Traineeships	%	43.0	44.3	38.7	40.5	43.8	46.8	47.6	25.9	24.4	57.1	40.8
Fellowships/Dissertation Grants	%	14.9	13.5	19.4	18.0	11.0	10.6	18.0	41.2	38.9	7.1	16.7
Own Resources	%	9.7	9.1	11.4	13.8	8.3	3.3	6.8	15.3	14.4	14.3	14.1
Foreign Government	%	2.5	2.7	2.0	0.1	1.5	6.6	0.5	0.0	1.1	0.0	0.1
Employer	%	2.0	2.2	1.4	3.0	2.4	0.4	4.4	4.7	4.4	0.0	2.8
Other	%	0.2	0.2	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.3
Engineering	N	4,833	4,112	720	2,382	382	2,061	252	80	65	12	1,919
Teaching Assistantships	%	8.8	8.9	8.2	7.1	11.0	10.6	9.5	5.0	7.7	0.0	6.9
Research Assistantships/Traineeships	%	51.9	51.9	51.8	44.1	55.5	60.2	53.6	18.8	29.2	25.0	44.7
Fellowships/Dissertation Grants	%	15.7	14.2	24.6	22.6	9.9	8.7	19.0	56.3	36.9	25.0	21.0
Own Resources	%	12.6	13.2	9.2	16.9	13.4	7.5	11.5	15.0	20.0	25.0	17.7
Foreign Government	%	5.4	5.8	3.1	0.2	5.8	11.2	0.8	0.0	0.0	8.3	0.1
Employer	%	5.2	5.5	3.2	8.3	4.5	1.8	5.2	5.0	6.2	16.7	8.8
Other	%	0.4	0.5	0.0	0.8	0.0	0.1	0.4	0.0	0.0	0.0	0.7
Life Sciences	N	7,459	4,111	3,348	4,926	574	1,947	345	167	183	28	4,145
Teaching Assistantships	%	10.6	11.8	9.1	10.2	12.4	11.1	5.8	7.8	7.7	0.0	10.8
Research Assistantships/Traineeships	%	38.0	40.2	35.2	32.8	46.2	48.4	34.5	16.8	23.0	32.1	34.1
Fellowships/Dissertation Grants	%	28.0	26.8	29.5	30.7	24.4	22.7	44.1	47.9	46.1	35.7	27.9
Own Resources	%	17.4	14.7	20.7	22.2	13.9	5.9	11.6	23.4	17.5	28.6	23.4
Foreign Government	%	3.2	3.7	2.4	0.3	1.0	10.8	1.2	0.0	1.1	3.6	0.2
Employer	%	2.3	2.2	2.5	3.0	1.2	0.8	1.4	2.4	2.2	0.0	1.1
Other	%	0.5	0.6	0.5	0.6	0.9	0.2	1.4	1.8	0.5	0.0	0.5
Social Sciences	N	6,180	2,827	3,353	5,036	240	896	178	294	232	53	4,218
Teaching Assistantships	%	19.2	21.0	17.6	17.3	22.9	28.9	18.5	9.2	12.5	9.4	18.1
Research Assistantships/Traineeships	%	13.8	13.4	14.1	13.8	14.6	13.3	12.9	8.8	10.8	9.4	14.8
Fellowships/Dissertation Grants	%	19.0	20.6	17.7	17.5	22.1	20.4	21.9	36.1	29.3	32.1	18.4
Own Resources	%	43.8	39.1	47.7	49.0	36.3	15.8	44.9	42.5	45.3	45.1	49.4
Foreign Government	%	2.4	3.6	1.3	0.2	3.8	14.5	0.6	0.0	0.9	1.9	0.1
Employer	%	1.4	1.9	0.9	1.5	0.4	1.1	1.1	3.1	1.3	0.0	1.4
Other	%	0.5	0.4	0.6	0.6	0.0	0.0	0.0	0.3	0.0	1.9	0.7
Humanities	N	4,942	2,532	2,410	4,065	286	583	119	159	157	22	3,550
Teaching Assistantships	%	32.8	30.5	35.2	31.7	38.5	37.5	28.6	13.2	31.8	40.9	32.7
Research Assistantships/Traineeships	%	1.2	1.3	1.2	1.2	0.7	2.0	1.7	1.3	0.6	0.0	1.2
Fellowships/Dissertation Grants	%	23.5	24.2	22.8	22.6	21.7	30.9	29.4	46.5	23.6	27.3	21.4
Own Resources	%	39.4	40.2	38.6	42.5	33.2	21.1	37.0	33.3	40.8	31.8	43.0
Foreign Government	%	1.3	1.7	0.9	0.2	4.2	7.4	3.4	0.6	0.6	0.0	0.1
Employer	%	1.3	1.6	1.0	1.4	1.7	0.5	0.0	3.1	2.5	0.0	1.4
Other	%	0.4	0.6	0.2	0.4	0.0	0.5	0.0	1.9	0.0	0.0	0.4
Education	N	5,753	2,069	3,683	5,140	158	449	93	573	227	53	4,139
Teaching Assistantships	%	7.1	7.4	6.9	6.2	12.7	15.5	3.2	3.5	3.5	3.8	6.7
Research Assistantships/Traineeships	%	6.5	7.1	6.2	5.3	12.0	18.1	14.0	3.5	4.8	11.3	5.3
Fellowships/Dissertation Grants	%	7.3	6.9	7.5	6.5	11.4	15.7	19.4	11.9	15.0	15.1	4.8
Own Resources	%	69.2	66.3	70.8	72.7	55.1	33.1	57.0	72.1	69.2	64.2	72.5
Foreign Government	%	1.3	2.0	1.0	0.1	3.8	14.8	2.2	0.3	0.0	0.0	0.0
Employer	%	7.7	8.9	7.0	8.2	4.4	2.9	4.3	7.3	7.5	3.8	8.6
Other	%	1.0	1.4	0.7	1.1	0.6	0.0	0.0	1.4	0.0	1.9	1.1
Prof/Other Fields	N	1,998	1,185	813	1,450	108	436	60	128	49	16	1,183
Teaching Assistantships	%	20.2	20.1	20.3	18.0	24.1	26.8	23.3	11.7	4.1	0.0	19.3
Research Assistantships/Traineeships	%	10.5	11.0	9.7	9.0	13.0	14.6	13.3	3.9	8.2	6.3	9.4
Fellowships/Dissertation Grants	%	14.0	15.5	11.8	11.2	14.8	22.8	16.3	28.1	6.1	6.3	11.4
Own Resources	%	46.5	43.0	51.7	54.6	38.9	21.4	41.7	52.3	49.0	62.5	55.6
Foreign Government	%	3.1	3.9	2.0	0.2	6.5	12.2	0.0	0.8	0.0	0.0	0.2
Employer	%	4.9	5.6	3.8	6.0	1.9	1.9	1.7	3.1	6.1	6.3	4.6
Other	%	0.9	0.9	0.7	1.0	0.9	0.2	1.7	0.0	0.0	0.0	1.0

*Includes Pacific Islander.
†Includes Alaskan Native.
‡Includes mathematics and computer sciences

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 20. Cumulative debt related to education of doctorate recipients, by broad field, 1

Cumulative Debt	Group Total		Physical Sciences*		Engineering		Life
	N	%	N	%	N	%	N
Total	37,188	100.0	5,770	100.0	4,845	100.0	7,524
$5,000 or less	3,561	9.6	626	10.8	497	10.3	801
$5,001-$10,000	2,946	7.9	482	8.4	332	6.9	637
$10,001-$15,000	2,402	6.5	367	6.4	267	5.5	532
$15,001-$20,000	1,945	5.2	232	4.0	173	3.6	392
$20,001-$25,000	1,534	4.1	171	3.0	146	3.0	280
$25,001-$30,000	1,309	3.5	140	2.4	91	1.9	230
$30,000+	4,946	13.3	357	6.2	381	7.9	767
No Debt	18,545	49.9	3,395	58.8	2,958	61.1	3,885

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 21. Cumulative debt related to education of doctorate recipients, by demographic

Cumulative Debt	Male		Female		Citizenship				
					U.S. Citizen		Perm. Resident		Tem
	N	%	N	%	N	%	N	%	N
$5,000 OR LESS	2,128	10.0	1,433	9.1	2,504	9.4	212	9.7	81
$5,001-$10,000	1,688	7.9	1,258	7.9	2,292	8.6	147	6.7	50
$10,001-$15,000	1,366	6.4	1,036	6.5	1,988	7.5	103	4.7	30
$15,001-$20,000	1,113	5.2	832	5.3	1,663	6.3	80	3.7	11
$20,001-$25,000	853	4.0	681	4.3	1,325	5.0	63	2.9	14
$25,001-$30,000	726	3.4	583	3.7	1,143	4.3	48	2.2	11
$30,000+	2,590	12.1	2,356	14.9	4,160	15.7	175	8.0	60
No Debt	10,889	51.0	7,656	48.3	11,457	43.2	1,360	62.2	5,65

*Includes Pacific Islanders.
†Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

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Sciences		Social Sciences		Humanities		Education		Professional/ Other	
	%	N	%	N	%	N	%	N	%
	100.0	6,223	100.0	4,990	100.0	5,833	100.0	2,003	100.0
	10.6	484	7.8	462	9.3	533	9.1	158	7.9
	8.5	471	7.6	462	9.3	400	6.9	162	8.1
	7.1	432	6.9	385	7.7	317	5.4	102	5.1
	5.2	430	6.9	332	6.7	267	4.6	119	5.9
	3.7	343	5.5	278	5.6	233	4.0	83	4.1
	3.1	338	5.4	238	4.8	189	3.2	83	4.1
	10.2	1,515	24.3	774	15.5	799	13.7	353	17.6
	51.6	2,210	35.5	2,059	41.3	3,095	53.1	943	47.1

group, 1999

	U.S. Citizens and Permanent Residents										
p. Resident		Asian*		Black		Hispanic		American Indian†		White	
	%	N	%	N	%	N	%	N	%	N	%
7	10.0	116	9.2	168	11.1	112	11.0	21	10.4	2,046	9.2
3	6.0	125	9.9	117	7.7	82	8.0	17	8.4	1,913	8.6
6	3.6	110	8.7	111	7.3	81	7.9	13	6.4	1,638	7.4
8	2.4	65	5.1	108	7.1	72	7.1	10	5.0	1,394	6.3
4	1.7	57	4.5	109	7.2	55	5.4	13	6.4	1,079	4.9
0	1.4	46	3.6	88	5.8	52	5.1	12	5.9	931	4.2
6	7.2	152	12.0	401	26.5	208	20.4	48	23.8	3,301	14.9
4	67.8	594	47.0	412	27.2	359	35.2	68	33.7	9,867	44.5

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Table 22. Postgraduation status of doctorate recipients by broad field for selected years, 1979-1999

		All Fields	Physical Sciences*	Engineering	Life Sciences	Social Sciences	Humanities	Education	Prof./ Other
Total									
1979	N	31,239	4,299	2,490	5,223	5,961	4,141	7,385	1,740
1984	N	31,337	4,452	2,913	5,758	5,929	3,536	6,808	1,941
1989	N	34,327	5,455	4,543	6,342	5,961	3,552	6,281	2,193
1994	N	41,034	6,822	5,822	7,739	6,613	4,744	6,708	2,586
1999	N	41,140	6,324	5,337	8,126	7,036	5,468	6,557	2,292
Total Responses to Postgraduation Status									
1979	N	29,039	4,066	2,316	4,894	5,517	3,778	6,833	1,635
1984	N	28,408	4,082	2,553	5,205	5,314	3,178	6,334	1,742
1989	N	30,766	4,889	3,956	5,803	5,235	3,215	5,715	1,953
1994	N	37,640	6,312	5,288	7,144	6,017	4,430	6,075	2,374
1999	N	37,138	5,766	4,846	7,512	6,230	4,973	5,801	2,010
Definite Commitments for Employment or Study									
1979	%	73.7	78.6	78.4	77.8	72.5	60.3	72.2	84.4
1984	%	73.2	77.1	71.8	75.7	69.4	62.7	74.9	82.7
1989	%	74.2	76.8	67.6	78.2	72.0	67.7	75.7	80.6
1994	%	66.3	64.6	55.9	71.7	66.5	58.3	73.3	73.7
1999	%	69.9	72.7	67.6	72.6	67.7	60.6	74.1	75.6
Seeking Employment or Study									
1979	%	26.3	21.4	21.6	22.2	27.5	39.7	27.8	15.6
1984	%	26.8	22.9	28.2	24.3	30.6	37.3	25.1	17.3
1989	%	25.8	23.2	32.4	21.8	28.0	32.3	24.3	19.4
1994	%	33.7	35.4	44.1	28.3	33.5	41.7	26.7	26.3
1999	%	30.1	27.3	32.4	27.4	32.3	39.4	25.9	24.4

NOTE: Percentages are based on the number of doctorate recipients who reported their postgraduation status (definite or seeking), regardless of plans (employment or study). See technical notes in appendix C for rates of nonresponse to the applicable questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 23. Postgraduation status of doctorate recipients by demographic group

			Sex		Citiz	
		Total	Men	Women	U.S. Citizens	Perm
Total						
1979	N	31,239	22,302	8,937	25,474	1,
1984	N	31,337	20,638	10,699	24,046	1,
1989	N	34,327	21,814	12,513	23,402	1,
1994	N	41,034	25,059	15,820	27,147	3,
1999	N	41,140	23,460	17,493	27,622	2,
Total Responses to Postgraduation Status						
1979	N	29,039	20,759	8,280	24,458	1,
1984	N	28,408	18,614	9,794	22,912	1,
1989	N	30,766	19,383	11,383	22,936	1,
1994	N	37,640	23,069	14,564	25,644	3,
1999	N	37,138	21,350	15,785	26,482	2,
Definite Commitments for Employment or Study						
1979	%	73.7	76.1	67.9	74.2	
1984	%	73.2	75.1	69.5	74.6	
1989	%	74.2	74.7	73.2	76.8	
1994	%	66.3	65.0	68.3	70.7	
1999	%	69.9	71.0	68.5	71.4	
Seeking Employment or Study						
1979	%	26.3	23.9	32.1	25.8	
1984	%	26.8	24.9	30.5	25.4	
1989	%	25.8	25.3	26.8	23.2	
1994	%	33.7	35.0	31.7	29.3	
1999	%	30.1	29.0	31.5	28.6	

NOTE: Percentages are based on the number of doctorate recipients who repo
(employment or study)
See technical notes in appendix C for rates of nonresponse to the applicable q

†Includes Pacific Islander
‡Includes Alaskan Native

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

for selected years, 1979-1999

enship		U.S. Citizens and Permanent Residents				
n Visa	Temp Visa	Asian*	Black	Hispanic	American Indian**	White
320	3,587	1,102	1,116	547	81	22,400
224	4,832	1,023	1,058	605	74	21,894
626	6,648	1,268	963	694	94	21,571
747	9,406	3,546	1,279	1,030	143	24,595
300	8,726	2,518	1,729	1,246	219	23,725
224	3,318	1,047	1,045	512	79	21,832
143	4,312	946	997	579	67	21,085
529	6,251	1,190	924	669	91	21,201
405	8,569	3,224	1,171	963	134	23,377
176	8,095	2,397	1,623	1,149	200	22,887
67.0	73.0	68.7	66.5	68.0	67.1	74.6
60.0	69.1	65.4	68.3	67.2	65.7	74.8
62.0	67.6	68.0	70.3	73.7	73.6	76.7
53.2	58.2	55.7	68.3	69.5	70.9	70.5
64.9	66.9	66.5	66.8	68.8	64.0	72.0
33.0	27.0	31.3	33.5	32.0	32.9	25.4
40.0	30.9	34.6	31.7	32.8	34.3	25.2
38.0	32.4	32.0	29.7	26.3	26.4	23.3
46.8	41.8	44.3	31.7	30.5	29.1	29.5
35.1	33.1	33.5	33.2	31.2	36.0	28.0

rted their postgraduation status (definite or seeking), regardless of plans.

uestions and for further explanation of postgraduation plans.

Table 24. Postgraduation commitments of doctorate recipients by type of plans and broad field for selected years: 1979-1999

		All Fields	Physical Sciences*	Engineering	Life Sciences	Social Sciences	Humanities	Education	Prof./ Other
All Definite Commitments									
1979	N	21,411	3,196	1,815	3,807	3,999	2,279	4,935	1,380
1984	N	20,789	3,148	1,833	3,939	3,689	1,994	4,746	1,440
1989	N	22,815	3,756	2,675	4,537	3,768	2,176	4,329	1,574
1994	N	24,945	4,079	2,957	5,120	4,001	2,583	4,455	1,750
1999	N	25,975	4,190	3,277	5,456	4,217	3,015	4,301	1,519
Definite Commitments with Responses to Type of Plans									
1979	N	21,228	3,185	1,809	3,782	3,958	2,250	4,880	1,364
1984	N	20,736	3,139	1,825	3,932	3,681	1,984	4,735	1,440
1989	N	22,699	3,743	2,667	4,525	3,753	2,151	4,296	1,564
1994	N	24,780	4,072	2,946	5,100	3,968	2,549	4,409	1,736
1999	N	25,744	4,170	3,261	5,416	4,187	2,974	4,231	1,505
Employment									
1979	%	80.0	62.8	87.6	45.7	87.7	94.3	97.3	97.4
1984	%	78.2	59.5	84.9	42.6	86.5	95.5	97.7	98.3
1989	%	74.1	52.5	80.0	41.4	84.0	94.3	96.6	97.2
1994	%	70.6	48.5	75.8	36.0	80.0	92.9	96.3	96.3
1999	%	69.8	53.5	77.5	36.2	74.0	91.4	94.9	95.3
Study									
1979	%	20.0	37.2	12.4	54.3	12.3	5.7	2.7	2.6
1984	%	21.8	40.5	15.1	57.4	13.5	4.5	2.3	1.7
1989	%	25.9	47.5	20.0	58.6	16.0	5.7	3.4	2.8
1994	%	29.4	51.5	24.2	64.0	20.0	7.1	3.7	3.7
1999	%	30.2	46.5	22.5	63.8	26.0	8.6	5.1	4.7

NOTE: Only doctorate recipients with definite commitments are included. "All Definite Commitments" includes doctorate recipients who reported definite commitments but not type of plans (employment or study). Percentages are based on the number of doctorate recipients who reported a definite commitment and a type of plan. See technical notes in appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 25. Postgraduation commitments of doctorate recipients by type of plans

		Total	Male	Female	U.S. Citizen	Pe
All Definite Commitments						
1979	N	21,411	15,789	5,622	18,142	
1984	N	20,789	13,980	6,809	17,098	
1989	N	22,815	14,482	8,333	17,611	
1994	N	24,945	15,001	9,941	18,138	
1999	N	25,975	15,161	10,812	18,915	
Definite Commitments with Responses to Type of Plans						
1979	N	21,228	15,655	5,573	18,015	
1984	N	20,736	13,938	6,798	17,069	
1989	N	22,699	14,414	8,285	17,532	
1994	N	24,780	14,912	9,865	18,025	
1999	N	25,744	15,050	10,693	18,755	
Employment						
1979	%	80.0	79.1	82.5	80.6	
1984	%	78.2	76.3	82.0	78.7	
1989	%	74.1	71.7	78.2	76.6	
1994	%	70.6	68.2	74.4	74.3	
1999	%	69.8	68.0	72.5	73.1	
Study						
1979	%	20.0	20.9	17.5	19.4	
1984	%	21.8	23.7	18.0	21.3	
1989	%	25.9	28.3	21.8	23.4	
1994	%	29.4	31.8	25.6	25.7	
1999	%	30.2	32.0	27.5	26.9	

NOTE: Only doctorate recipients with definite commitments are included. "All Definite Co (employment or study). Percentages are based on the number of doctorate recipients w rates of nonresponse to the applicable survey questions and for further explanation of po

†Includes Pacific Islander. ‡Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

and demographic group for selected years, 1979-1999

rmanent Visa	Temporary Visa	U.S. Citizens and Permanent Residents				
		Asian†	Black	Hispanic	American Indian‡	White
820	2,422	719	695	348	53	16,282
686	2,979	619	681	389	44	15,776
948	4,223	809	650	493	67	16,254
1,811	4,984	1,795	800	669	95	16,484
1,413	5,417	1,593	1,084	791	128	16,476
811	2,376	713	680	345	53	16,180
683	2,958	619	676	388	43	15,751
940	4,195	807	640	487	67	16,191
1,800	4,943	1,787	791	659	94	16,388
1,400	5,369	1,581	1,072	783	127	16,340
77.3	76.3	73.2	93.8	86.7	86.8	80.1
78.8	75.2	72.5	92.9	84.8	90.7	78.2
72.7	64.0	66.7	88.8	74.5	80.6	76.5
54.9	63.0	51.1	82.2	73.6	74.5	74.5
63.2	60.0	59.5	81.2	73.6	75.6	73.0
22.7	23.7	26.8	6.2	13.3	13.2	19.9
21.2	24.8	27.5	7.1	15.2	9.3	21.8
27.3	36.0	33.3	11.3	25.5	19.4	23.5
45.1	37.0	48.9	17.8	26.4	25.5	25.5
36.8	40.0	40.5	18.8	26.4	24.4	27.0

nmitments" includes recipients who reported definite commitments but not type of plans. no reported a definite commitment and a type of plan. See technical notes in appendix C for stgraduation plans.

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Table 26. Postdoctoral location of non-U.S. citizen doctorate recipients with postgraduation commitments by major field and visa status, 1999

Field	Resp. to Location/ Type of Plans (N)	Permanent Visa: U.S. Location Employ (%)	Permanent Visa: U.S. Location Study (%)	Permanent Visa: Foreign Location Employ (%)	Permanent Visa: Foreign Location Study (%)	Number of Responses	Temporary Visa: U.S. Location Employ (%)	Temporary Visa: U.S. Location Study (%)	Temporary Visa: Foreign Location Employ (%)	Temporary Visa: Foreign Location Study (%)
All Fields	1,386	57.1	34.8	6.1	2.0	5,532	36.4	33.0	24.1	6.5
Physical Sciences*	275	57.1	37.8	1.8	3.3	1,388	34.1	46.0	12.0	7.9
Physics & Astronomy	65	52.3	46.2	0.0	1.5	328	23.2	53.7	7.6	15.5
Chemistry	87	50.6	46.0	1.1	2.3	402	26.6	65.7	4.7	3.0
Earth, Atmos., & Marine Sci.	30	30.0	53.3	6.7	10.0	160	25.0	41.9	24.4	8.8
Mathematics	41	56.1	34.1	2.4	7.3	286	40.9	35.7	13.6	9.8
Computer Sciences	52	90.4	7.7	0.0	1.9	212	63.2	13.7	21.2	1.9
Engineering	247	75.7	20.2	2.8	1.2	1,290	56.0	22.1	19.2	2.7
Life Sciences	377	23.9	71.6	2.7	1.9	1,341	13.7	59.0	19.6	7.7
Biological Sciences	294	15.3	81.0	2.0	1.7	853	9.7	76.1	8.2	6.0
Health Sciences	43	74.4	23.3	0.0	2.3	185	30.3	30.3	31.4	8.1
Agricultural Sciences	40	32.5	55.0	10.0	2.5	303	14.9	28.4	44.6	12.2
Social Sciences	147	68.7	18.4	11.6	1.4	581	43.7	10.8	39.1	6.4
Psychology	43	58.1	37.2	2.3	2.3	86	38.4	31.4	19.8	10.5
Economics	39	82.1	2.6	15.4	0.0	275	52.4	3.6	40.4	3.6
Political Sci./International Rel.	26	57.7	15.4	26.9	0.0	96	27.1	16.7	43.8	12.5
Sociology	18	77.8	22.2	0.0	0.0	42	47.6	2.4	47.6	2.4
Humanities	167	78.4	9.0	11.4	1.2	347	41.8	7.2	42.1	8.9
Education	91	70.3	12.1	12.1	5.5	273	29.3	5.1	56.6	6.6
Professional/Other	82	74.4	6.1	0.0	19.5	312	49.4	3.8	44.9	1.9
Business & Management	70	78.6	7.1	12.9	1.4	291	54.3	5.5	37.5	2.7

NOTE: Only non-U.S. citizen doctorate recipients with definite commitments are included. Percentages are based on the number of doctorate recipients who reported a definite commitment and a location. See technical notes in appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 27. Postdoctoral location of non-U.S. citizen doctorate recipients with postgraduation commitments by visa status for selected years, 1979-1999

		All Non-U.S. Citizens	Permanent Visa	Temporary Visa
All Definite Commitments				
1979	N	3,242	820	2,422
1984	N	3,665	686	2,979
1989	N	5,171	948	4,223
1994	N	6,795	1,811	4,984
1999	N	7,033	1,413	5,620
Definite Commitments with Responses to Location				
1979	N	3,061	767	2,294
1984	N	3,375	624	2,751
1989	N	4,657	854	3,803
1994	N	6,740	1,798	4,942
1999	N	6,998	1,404	5,594
U.S. Location				
1979	%	51.8	92.6	38.2
1984	%	53.3	93.4	44.2
1989	%	62.8	85.8	57.6
1994	%	61.9	89.6	51.9
1999	%	72.1	91.4	67.3
Foreign Location				
1979	%	48.2	7.4	61.8
1984	%	46.7	6.6	55.8
1989	%	37.2	14.2	42.4
1994	%	38.1	10.4	48.1
1999	%	27.9	8.6	32.7

NOTE: Only non-U.S. citizen doctorate recipients with definite commitments are included. "All Definite Commitments" includes recipients who reported definite commitments but not location (U.S. or foreign). Percentages are based on the number of doctorate recipients who reported a definite commitment and a location.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

TABLE 28. Employment sector of doctorate recipients with postgraduation commitments in the United States by demographic group for selected years, 1979-1999

		Total	Male	Female	U.S. Citizen	Perm. Visa	Temp. Visa	U.S. Citizens and Permanent Residents				
								Asian†	Black	Hisp-anic	Amer Indian‡	White
All Employment Commitments												
1979	N	14,771	10,597	4,174	13,746	539	470	472	588	275	44	12,298
1984	N	13,363	8,613	4,750	12,245	452	648	394	528	290	35	11,292
1989	N	13,893	8,282	5,611	12,336	513	1,033	459	479	312	51	11,385
1994	N	15,117	8,328	6,787	13,069	840	1,205	818	639	464	70	11,865
1999	N	16,170	8,975	7,195	13,389	795	1,925	875	851	550	91	11,643
Employment Commitments with Responses to Sector												
1979	N	14,740	10,575	4,165	13,718	537	469	471	586	275	44	12,275
1984	N	13,346	8,603	4,743	12,230	452	646	391	527	290	35	11,281
1989	N	13,872	8,270	5,602	12,318	512	1,031	458	479	311	51	11,369
1994	N	14,871	8,211	6,658	12,864	824	1,180	804	627	451	69	11,685
1999	N	16,003	8,897	7,106	13,254	786	1,903	864	836	541	90	11,540
Academe												
1979	%	55.2	51.9	63.5	55.7	42.8	54.6	31.4	59.6	70.5	59.1	55.5
1984	%	50.7	47.4	56.7	49.9	53.1	63.9	37.6	53.1	58.6	51.4	50.1
1989	%	52.8	49.1	58.2	51.6	59.8	62.9	39.7	57.8	55.6	37.3	52.1
1994	%	52.1	46.4	59.1	52.8	45.9	49.2	38.4	55.3	59.4	68.1	52.8
1999	%	49.2	43.6	56.2	51.7	44.0	34.7	36.0	57.1	59.0	53.3	51.6
Industry/Self-Employed												
1979	%	16.9	20.6	7.5	15.2	46.4	33.5	52.4	7.7	8.0	6.8	15.5
1984	%	19.2	23.2	11.9	18.0	34.7	30.7	44.2	7.8	12.1	8.6	18.4
1989	%	20.6	26.2	12.3	19.2	32.0	31.2	45.6	7.7	17.0	29.4	19.1
1994	%	21.4	28.7	12.5	18.0	44.2	42.9	49.0	7.5	12.0	14.5	18.5
1999	%	27.8	36.3	17.1	21.9	44.5	60.4	50.1	12.2	17.6	13.3	22.2
Government												
1979	%	12.7	13.3	11.1	13.3	4.7	3.6	10.2	15.9	13.5	11.4	13.0
1984	%	11.7	12.6	9.9	12.5	4.4	1.2	11.5	14.2	15.5	14.3	12.0
1989	%	10.2	10.7	9.5	11.2	2.0	2.2	7.0	13.8	10.9	13.7	10.9
1994	%	8.7	9.9	7.3	9.6	4.6	1.7	6.2	9.6	8.9	10.1	9.5
1999	%	7.5	8.3	6.5	8.7	2.8	0.9	5.8	7.4	8.3	8.9	8.7
Other												
1979	%	15.2	14.1	18.0	15.8	6.1	8.3	5.9	16.9	8.0	22.7	16.0
1984	%	18.5	16.8	21.5	19.6	7.7	4.2	6.6	24.9	13.8	25.7	19.5
1989	%	16.4	14.1	20.0	17.9	6.3	3.6	7.6	20.7	16.4	19.6	17.8
1994	%	17.7	15.0	21.1	19.6	5.3	6.2	6.3	27.6	19.7	7.2	19.2
1999	%	15.5	11.8	20.2	17.6	8.7	3.9	8.1	23.3	15.2	24.4	17.5

†Includes Pacific Islander.
‡Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2-1. Percentages of U.S. citizen doctorate recipients in 1999 who remained in the same state in which they were born, by demographic background and employment sector

	Number	Same Birth, High School, College, Doctorate, and Employment State	No Two the Same
		%	%
Total	23,153	13.4	8.7
By Sex			
Male	11,940	11.4	9.0
Female	11,213	15.6	8.4
By Race/Ethnicity			
American Indian*	173	18.5	8.1
Asian+	494	15.0	9.7
Black	1,275	18.3	6.8
Hispanic	712	22.9	4.8
White	20,216	12.7	8.9
By Marital Status			
Married/marriage-like	14,679	14.6	8.0
Separated/Widowed/Divorced	1,824	15.6	7.3
Never married	6,481	10.3	10.7
By Parents' Education			
Some college or less	8,326	19.9	3.2
Bachelor's or higher	14,669	9.8	11.8
By Employment Sector#			
Academe	8,441	12.6	8.7
Government	1,278	13.9	9.1
Private Sector	3,756	12.4	8.7
Other	2,735	27.1	5.1

*Includes Alaskan Native. +Includes Pacific Islander.
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 2-2. Percentages of U.S. citizen doctorate recipients in 1999 who migrated interstate at different transition points, by demographic background and employment sector

	Number	Birth & High School	High School & College	College & Doctorate	Doctorate & Employment
		%	%	%	%
Total	23,153	34.0	36.1	68.8	55.2
By Sex					
Male	11,940	34.6	36.5	70.4	59.2
Female	11,213	33.4	35.6	67.0	50.9
By Race/Ethnicity					
American Indian*	173	33.5	30.1	62.4	57.8
Asian+	494	41.9	38.7	64.2	53.6
Black	1,275	28.2	36.8	64.5	52.2
Hispanic	712	27.1	23.9	60.1	51.1
White	20,216	34.4	36.4	69.5	55.5
By Marital Status					
Married/Marriage-like	14,679	34.0	35.0	68.0	51.8
Separated/Widowed/Divorced	1,824	32.6	31.5	64.4	50.1
Never married	6,481	34.4	39.7	71.6	64.1
By Parents' Education					
Some college or less	8,326	21.8	24.1	62.0	49.1
Bachelor's or higher	14,669	41.0	42.9	72.6	58.6
By Employment Sector#					
Academe	8,441	33.0	35.5	70.0	58.6
Government	1,278	36.6	35.4	68.8	52.5
Private Sector	3,756	35.4	36.7	67.9	54.7
Other	2,735	28.5	30.1	56.7	40.3

*Includes Alaskan Native. +Includes Pacific Islander.
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 2-3. Percentages of U.S. citizen doctorate recipients in 1999 who remained in the same state at various time points prior to employment, by demographic background and employment sector

	Number	Same Birth & Employment	Same HS & Employment	Same College & Employment
		%	%	%
Total	23,153	24.0	29.2	28.3
By Sex				
Male	11,940	21.7	26.1	25.6
Female	11,213	26.4	32.5	31.1
By Race/Ethnicity				
American Indian*	173	34.1	38.2	36.4
Asian+	494	25.9	32.4	33.6
Black	1,275	30.9	35.3	33.6
Hispanic	712	38.3	44.2	43.4
White	20,216	23.0	28.2	27.2
By Marital Status				
Married/marriage-like	14,679	25.1	30.8	30.1
Separated/Widowed/Divorced	1,824	26.4	32.7	32.1
Never married	6,481	21.0	24.9	23.2
By Parents' Education				
Some college or less	8,326	31.5	36.0	35.9
Bachelor's or higher	14,669	19.8	25.4	23.9
By Employment Sector#				
Academe	8,441	23.0	28.0	27.9
Government	1,278	24.1	31.3	29.2
Private Sector	3,756	23.5	28.8	27.7
Other	2,735	40.8	48.6	46.4

*Includes Alaskan Native. +Includes Pacific Islander.
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2-4. Percentages of U.S. citizen doctorate recipients in 1999 who migrated interstate at different transition points, by field of study

	Number	Birth & High School	High School & College	College & Doctorate	Doctorate & Employment
		%	%	%	%
Total	23,153	34.0	36.1	68.8	55.2
Science & Engineering	12,763	35.3	37.4	71.0	59.4
Engineering	1,950	37.2	37.4	67.2	56.7
Physics/Astronomy	641	36.3	41.8	77.5	67.2
Chemistry	1,071	29.4	30.2	74.1	70.5
Earth, Atmosphere, Ocean	399	41.4	44.1	74.7	58.6
Mathematics	444	35.1	42.3	71.6	65.8
Computer Science	303	40.9	44.9	70.3	56.4
Biological Science	3,044	36.5	36.5	70.4	56.5
Agricultural Science	421	31.1	29.9	73.4	63.2
Psychology	2,673	34.2	36.6	68.7	55.2
Social Science	1,817	36.5	43.6	74.7	65.6
Non-Science & Engineering	10,390	32.1	34.2	65.6	49.4
Humanities	3,552	37.9	44.4	76.1	61.5
Other	6,838	29.0	28.5	60.6	43.2

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

APPENDICES

Table 20 Cumulative debt related to education of doctorate recipients, by broad field, 1

Cumulative Debt	Group Total N	Group Total %	Physical Sciences* N	Physical Sciences* %	Engineering N	Engineering %	Life N
Total	37,188	100.0	5,770	100.0	4,845	100.0	7,524
$5,000 or less	3,561	9.6	626	10.8	497	10.3	801
$5,001-$10,000	2,946	7.9	482	8.4	332	6.9	631
$10,001-$15,000	2,402	6.5	367	6.4	267	5.5	532
$15,001-$20,000	1,945	5.2	232	4.0	173	3.6	393
$20,001-$25,000	1,534	4.1	171	3.0	146	3.0	286
$25,001-$30,000	1,309	3.5	140	2.4	91	1.9	236
$30,000+	4,946	13.3	357	6.2	381	7.9	767
No Debt	18,545	49.9	3,395	58.8	2,958	61.1	3,885

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

Table 21 Cumulative debt related to education of doctorate recipients, by demographic

					Citizenship				
	Male		Female		U.S. Citizen		Perm. Resident		Ten
Cumulative Debt	N	%	N	%	N	%	N	%	N
$5,000 OR LESS	2,128	10.0	1,433	9.1	2,504	9.4	212	9.7	83
$5,001-$10,000	1,688	7.9	1,258	7.9	2,292	8.6	147	6.7	50
$10,001-$15,000	1,366	6.4	1,036	6.5	1,988	7.5	103	4.7	30
$15,001-$20,000	1,113	5.2	832	5.3	1,663	6.3	80	3.7	19
$20,001-$25,000	853	4.0	681	4.3	1,325	5.0	63	2.9	14
$25,001-$30,000	726	3.4	583	3.7	1,143	4.3	48	2.2	11
$30,000+	2,590	12.1	2,356	14.9	4,160	15.7	175	8.0	60
No Debt	10,889	51.0	7,653	48.3	11,457	43.2	1,360	62.2	5,69

*Includes Pacific Islanders.
†Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

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Sciences		Social Sciences		Humanities		Education		Professional/ Other	
	%	N	%	N	%	N	%	N	%
3	100.0	6,223	100.0	4,990	100.0	5,833	100.0	2,003	100.0
	10.6	484	7.8	462	9.3	533	9.1	158	7.9
7	8.5	471	7.6	462	9.3	400	6.9	162	8.1
2	7.1	432	6.9	385	7.7	317	5.4	102	5.1
2	5.2	430	6.9	332	6.7	267	4.6	119	5.9
0	3.7	343	5.5	278	5.6	233	4.0	83	4.1
0	3.1	338	5.4	238	4.8	189	3.2	83	4.1
7	10.2	1,515	24.3	774	15.5	799	13.7	353	17.6
5	51.6	2,210	35.5	2,059	41.3	3,095	53.1	943	47.1

group, 1999

		U.S. Citizens and Permanent Residents									
p. Resident		Asian*		Black		Hispanic		American Indian†		White	
	%	N	%	N	%	N	%	N	%	N	%
7	10.0	116	9.2	168	11.1	112	11.0	21	10.4	2,046	9.2
3	6.0	125	9.9	117	7.7	82	8.0	17	8.4	1,913	8.6
6	3.6	110	8.7	111	7.3	81	7.9	13	6.4	1,638	7.4
8	2.4	65	5.1	108	7.1	72	7.1	10	5.0	1,394	6.3
4	1.7	57	4.5	109	7.2	55	5.4	13	6.4	1,079	4.9
6	1.4	46	3.6	88	5.8	52	5.1	12	5.9	931	4.2
6	7.2	152	12.0	401	26.5	208	20.4	48	23.8	3,301	14.9
4	67.8	594	47.0	412	27.2	359	35.2	68	33.7	9,867	44.5

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Table 22. Postgraduation status of doctorate recipients by broad field for selected years, 1979-1999

		All Fields	Physical Sciences*	Engi-neering	Life Sciences	Social Sciences	Human-ities	Educa-tion	Prof./ Other
Total									
1979	N	31,239	4,299	2,490	5,223	5,961	4,141	7,385	1,740
1984	N	31,337	4,452	2,913	5,758	5,929	3,536	6,808	1,941
1989	N	34,327	5,455	4,543	6,342	5,961	3,552	6,281	2,193
1994	N	41,034	6,822	5,822	7,739	6,613	4,744	6,708	2,586
1999	N	41,140	6,324	5,337	8,126	7,036	5,468	6,557	2,292
Total Responses to Postgraduation Status									
1979	N	29,039	4,066	2,316	4,894	5,517	3,778	6,833	1,635
1984	N	28,408	4,082	2,553	5,205	5,314	3,178	6,334	1,742
1989	N	30,766	4,889	3,956	5,803	5,235	3,215	5,715	1,953
1994	N	37,640	6,312	5,288	7,144	6,017	4,430	6,075	2,374
1999	N	37,138	5,766	4,846	7,512	6,230	4,973	5,801	2,010
Definite Commitments for Employment or Study									
1979	%	73.7	78.6	78.4	77.8	72.5	60.3	72.2	84.4
1984	%	73.2	77.1	71.8	75.7	69.4	62.7	74.9	82.7
1989	%	74.2	76.8	67.6	78.2	72.0	67.7	75.7	80.6
1994	%	66.3	64.6	55.9	71.7	66.5	58.3	73.3	73.7
1999	%	69.9	72.7	67.6	72.6	67.7	60.6	74.1	75.6
Seeking Employment or Study									
1979	%	26.3	21.4	21.6	22.2	27.5	39.7	27.8	15.6
1984	%	26.8	22.9	28.2	24.3	30.6	37.3	25.1	17.3
1989	%	25.8	23.2	32.4	21.8	28.0	32.3	24.3	19.4
1994	%	33.7	35.4	44.1	28.3	33.5	41.7	26.7	26.3
1999	%	30.1	27.3	32.4	27.4	32.3	39.4	25.9	24.4

NOTE: Percentages are based on the number of doctorate recipients who reported their postgraduation status (definite or seeking), regardless of plans (employment or study). See technical notes in appendix C for rates of nonresponse to the applicable questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 23. Postgraduation status of doctorate recipients by demographic group

			Sex		Citize	
		Total	Men	Women	U.S. Citizens	Perm
Total						
1979	N	31,239	22,302	8,937	25,474	1,
1984	N	31,337	20,638	10,699	24,046	1,
1989	N	34,327	21,814	12,513	23,402	1,
1994	N	41,034	25,059	15,820	27,147	3,
1999	N	41,140	23,460	17,493	27,622	2,
Total Responses to Postgraduation Status						
1979	N	29,039	20,759	8,280	24,458	1,
1984	N	28,408	18,614	9,794	22,912	1,
1989	N	30,766	19,383	11,383	22,936	1,
1994	N	37,640	23,069	14,564	25,644	3,
1999	N	37,138	21,350	15,785	26,482	2,
Definite Commitments for Employment or Study						
1979	%	73.7	76.1	67.9	74.2	6
1984	%	73.2	75.1	69.5	74.6	6
1989	%	74.2	74.7	73.2	76.8	6
1994	%	66.3	65.0	68.3	70.7	5
1999	%	69.9	71.0	68.5	71.4	6
Seeking Employment or Study						
1979	%	26.3	23.9	32.1	25.8	3
1984	%	26.8	24.9	30.5	25.4	4
1989	%	25.8	25.3	26.8	23.2	3
1994	%	33.7	35.0	31.7	29.3	4
1999	%	30.1	29.0	31.5	28.6	3

NOTE: Percentages are based on the number of doctorate recipients who repo
(employment or study).
See technical notes in appendix C for rates of nonresponse to the applicable qu

†Includes Pacific Islander.
‡Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

for selected years, 1979-1999

enship		U.S. Citizens and Permanent Residents				
n Visa	Temp Visa	Asian*	Black	Hispanic	American Indian**	White
320	3,587	1,102	1,116	547	81	22,400
224	4,832	1,023	1,058	605	74	21,894
626	6,648	1,268	963	694	94	21,571
747	9,406	3,546	1,279	1,030	143	24,595
300	8,726	2,518	1,729	1,246	219	23,725
224	3,318	1,047	1,045	512	79	21,832
143	4,312	946	997	579	67	21,085
529	6,251	1,190	924	669	91	21,201
405	8,569	3,224	1,171	963	134	23,377
176	8,095	2,397	1,623	1,149	200	22,887
67.0	73.0	68.7	66.5	68.0	67.1	74.6
60.0	69.1	65.4	68.3	67.2	65.7	74.8
62.0	67.6	68.0	70.3	73.7	73.6	76.7
53.2	58.2	55.7	68.3	69.5	70.9	70.5
64.9	66.9	66.5	66.8	68.8	64.0	72.0
33.0	27.0	31.3	33.5	32.0	32.9	25.4
40.0	30.9	34.6	31.7	32.8	34.3	25.2
38.0	32.4	32.0	29.7	26.3	26.4	23.3
46.8	41.8	44.3	31.7	30.5	29.1	29.5
35.1	33.1	33.5	33.2	31.2	36.0	28.0

rted their postgraduation status (definite or seeking), regardless of plans

uestions and for further explanation of postgraduation plans.

Table 24. Postgraduation commitments of doctorate recipients by type of plans and broad field for selected years, 1979-1999

		All Fields	Physical Sciences*	Engineering	Life Sciences	Social Sciences	Humanities	Education	Prof./ Other
All Definite Commitments									
1979	N	21,411	3,196	1,815	3,807	3,999	2,279	4,935	1,380
1984	N	20,789	3,148	1,833	3,939	3,689	1,994	4,746	1,440
1989	N	22,815	3,756	2,675	4,537	3,768	2,176	4,329	1,574
1994	N	24,945	4,079	2,957	5,120	4,001	2,583	4,455	1,750
1999	N	25,975	4,190	3,277	5,456	4,217	3,015	4,301	1,519
Definite Commitments with Responses to Type of Plans									
1979	N	21,228	3,185	1,809	3,782	3,958	2,250	4,880	1,364
1984	N	20,736	3,139	1,825	3,932	3,681	1,984	4,735	1,440
1989	N	22,699	3,743	2,667	4,525	3,753	2,151	4,296	1,564
1994	N	24,780	4,072	2,946	5,100	3,968	2,549	4,409	1,736
1999	N	25,744	4,170	3,261	5,416	4,187	2,974	4,231	1,505
Employment									
1979	%	80.0	62.8	87.6	45.7	87.7	94.3	97.3	97.4
1984	%	78.2	59.5	84.9	42.6	86.5	95.5	97.7	98.3
1989	%	74.1	52.5	80.0	41.4	84.0	94.3	96.6	97.2
1994	%	70.6	48.5	75.8	36.0	80.0	92.9	96.3	96.3
1999	%	69.8	53.5	77.5	36.2	74.0	91.4	94.9	95.3
Study									
1979	%	20.0	37.2	12.4	54.3	12.3	5.7	2.7	2.6
1984	%	21.8	40.5	15.1	57.4	13.5	4.5	2.3	1.7
1989	%	25.9	47.5	20.0	58.6	16.0	5.7	3.4	2.8
1994	%	29.4	51.5	24.2	64.0	20.0	7.1	3.7	3.7
1999	%	30.2	46.5	22.5	63.8	26.0	8.6	5.1	4.7

NOTE: Only doctorate recipients with definite commitments are included. "All Definite Commitments" includes doctorate recipients who reported definite commitments but not type of plans (employment or study). Percentages are based on the number of doctorate recipients who reported a definite commitment and a type of plan. See technical notes in appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 25. Postgraduation commitments of doctorate recipients by type of pla

		Total	Male	Female	U.S. Citizen
All Definite Commitments					
1979	N	21,411	15,789	5,622	18,142
1984	N	20,789	13,980	6,809	17,098
1989	N	22,815	14,482	8,333	17,611
1994	N	24,945	15,001	9,941	18,138
1999	N	25,975	15,161	10,812	18,915
Definite Commitments with Responses to Type of Plans					
1979	N	21,228	15,655	5,573	18,015
1984	N	20,736	13,938	6,798	17,069
1989	N	22,699	14,414	8,285	17,532
1994	N	24,780	14,912	9,865	18,025
1999	N	25,744	15,050	10,693	18,755
Employment					
1979	%	80.0	79.1	82.5	80.6
1984	%	78.2	76.3	82.0	78.7
1989	%	74.1	71.7	78.2	76.6
1994	%	70.6	68.2	74.4	74.3
1999	%	69.8	68.0	72.5	73.1
Study					
1979	%	20.0	20.9	17.5	19.4
1984	%	21.8	23.7	18.0	21.3
1989	%	25.9	28.3	21.8	23.4
1994	%	29.4	31.8	25.6	25.7
1999	%	30.2	32.0	27.5	26.9

NOTE: Only doctorate recipients with definite commitments are included. "All Definite C (employment or study). Percentages are based on the number of doctorate recipients rates of nonresponse to the applicable survey questions and for further explanation of

†Includes Pacific Islander. ‡Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

ns and demographic group for selected years, 1979-1999

Permanent Visa	Temporary Visa	U.S. Citizens and Permanent Residents				
		Asian†	Black	Hispanic	American Indian‡	White
820	2,422	719	695	348	53	16,282
686	2,979	619	681	389	44	15,776
948	4,223	809	650	493	67	16,254
1,811	4,984	1,795	800	669	95	16,484
1,413	5,417	1,593	1,084	791	128	16,476
811	2,376	713	680	345	53	16,180
683	2,958	619	676	388	43	15,751
940	4,195	807	640	487	67	16,191
1,800	4,943	1,787	791	659	94	16,388
1,400	5,369	1,581	1,072	783	127	16,340
77.3	76.3	73.2	93.8	86.7	86.8	80.1
78.8	75.2	72.5	92.9	84.8	90.7	78.2
72.7	64.0	66.7	88.8	74.5	80.6	76.5
54.9	63.0	51.1	82.2	73.6	74.5	74.5
63.2	60.0	59.5	81.2	73.6	75.6	73.0
22.7	23.7	26.8	6.2	13.3	13.2	19.9
21.2	24.8	27.5	7.1	15.2	9.3	21.8
27.3	36.0	33.3	11.3	25.5	19.4	23.5
45.1	37.0	48.9	17.8	26.4	25.5	25.5
36.8	40.0	40.5	18.8	26.4	24.4	27.0

Commitments" includes recipients who reported definite commitments but not type of plans who reported a definite commitment and a type of plan. See technical notes in appendix C for postgraduation plans.

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Table 26. Postdoctoral location of non-U.S. citizen doctorate recipients with postgraduation commitments by major field and visa status, 1999

Field	Resp. to Location/ Type of Plans (N)	Permanent Visa: U.S. Location Employ (%)	Permanent Visa: U.S. Location Study (%)	Permanent Visa: Foreign Location Employ (%)	Permanent Visa: Foreign Location Study (%)	Number of Responses	Temporary Visa: U.S. Location Employ (%)	Temporary Visa: U.S. Location Study (%)	Temporary Visa: Foreign Location Employ (%)	Temporary Visa: Foreign Location Study (%)
All Fields	1,386	57.1	34.8	6.1	2.0	5,532	36.4	33.0	24.3	6.2
Physical Sciences*	275	57.1	37.8	1.8	3.3	1,388	34.1	46.0	12.0	7.9
Physics & Astronomy	65	52.3	46.2	0.0	1.5	328	23.2	53.7	7.6	15.5
Chemistry	87	50.6	46.0	1.1	2.3	402	26.6	65.7	4.7	3.0
Earth, Atmos., & Marine Sci.	30	30.0	53.3	6.7	10.0	160	25.0	41.9	24.4	8.8
Mathematics	41	56.1	34.1	2.4	7.3	286	40.9	35.7	13.6	9.8
Computer Sciences	52	90.4	7.7	0.0	1.9	212	63.2	13.7	21.2	1.9
Engineering	247	75.7	20.2	2.8	1.2	1,290	56.0	22.1	19.2	2.7
Life Sciences	377	23.9	71.6	2.7	1.9	1,341	13.7	59.0	19.6	7.7
Biological Sciences	294	15.3	81.0	2.0	1.7	853	9.7	76.1	8.2	6.0
Health Sciences	43	74.4	23.3	0.0	2.3	185	30.3	30.3	31.4	8.1
Agricultural Sciences	40	32.5	55.0	10.0	2.5	303	14.9	28.4	44.6	12.2
Social Sciences	147	68.7	18.4	11.6	1.4	581	43.7	10.8	39.1	6.4
Psychology	43	58.1	37.2	2.3	2.3	86	38.4	31.4	19.8	10.5
Economics	39	82.1	2.6	15.4	0.0	275	52.4	3.6	40.4	3.6
Political Sci./International Rel.	26	57.7	15.4	26.9	0.0	96	27.1	16.7	43.8	12.5
Sociology	18	77.8	22.2	0.0	0.0	42	47.6	2.4	47.6	2.4
Humanities	167	78.4	9.0	11.4	1.2	347	41.8	7.2	42.1	8.9
Education	91	70.3	12.1	12.1	5.5	273	29.3	5.1	56.8	8.8
Professional/Other	82	74.4	6.1	0.0	19.5	312	49.4	3.8	44.9	1.9
Business & Management	70	78.6	7.1	12.9	1.4	291	54.3	5.5	37.5	2.7

NOTE: Only non-U.S. citizen doctorate recipients with definite commitments are included. Percentages are based on the number of doctorate recipients who reported a definite commitment and a location. See technical notes in appendix C for rates of nonresponse to the applicable survey questions and for further explanation of postgraduation plans.

*Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 27. Postdoctoral location of non-U.S. citizen doctorate recipients with postgraduation commitments by visa status for selected years, 1979-1999

		All Non-U.S. Citizens	Permanent Visa	Temporary Visa
All Definite Commitments				
1979	N	3,242	820	2,422
1984	N	3,665	686	2,979
1989	N	5,171	948	4,223
1994	N	6,795	1,811	4,984
1999	N	7,033	1,413	5,620
Definite Commitments with Responses to Location				
1979	N	3,061	767	2,294
1984	N	3,375	624	2,751
1989	N	4,657	854	3,803
1994	N	6,740	1,798	4,942
1999	N	6,998	1,404	5,594
U.S. Location				
1979	%	51.8	92.6	38.2
1984	%	53.3	93.4	44.2
1989	%	62.8	85.8	57.6
1994	%	61.9	89.6	51.9
1999	%	72.1	91.4	67.3
Foreign Location				
1979	%	48.2	7.4	61.8
1984	%	46.7	6.6	55.8
1989	%	37.2	14.2	42.4
1994	%	38.1	10.4	48.1
1999	%	27.9	8.6	32.7

NOTE: Only non-U.S. citizen doctorate recipients with definite commitments are included. "All Definite Commitments" includes recipients who reported definite commitments but not location (U.S. or foreign). Percentages are based on the number of doctorate recipients who reported a definite commitment and a location.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

TABLE 28. Employment sector of doctorate recipients with postgraduation commitments in the United States by demographic group for selected years, 1979-1999

								U.S. Citizens and Permanent Residents				
		Total	Male	Female	U.S. Citizen	Perm. Visa	Temp. Visa	Asian†	Black	Hisp-anic	Amer. Indian‡	White
All Employment Commitments												
1979	N	14,771	10,597	4,174	13,746	539	470	472	588	275	44	12,298
1984	N	13,363	8,613	4,750	12,245	452	648	394	528	290	35	11,292
1989	N	13,893	8,282	5,611	12,336	513	1,033	459	479	312	51	11,385
1994	N	15,117	8,328	6,787	13,069	840	1,205	818	639	464	70	11,865
1999	N	16,170	8,975	7,195	13,389	795	1,925	875	851	550	91	11,643
Employment Commitments with Responses to Sector												
1979	N	14,740	10,575	4,165	13,718	537	469	471	586	275	44	12,275
1984	N	13,346	8,603	4,743	12,230	452	646	391	527	290	35	11,281
1989	N	13,872	8,270	5,602	12,318	512	1,031	458	479	311	51	11,369
1994	N	14,871	8,211	6,658	12,864	824	1,180	804	627	451	69	11,685
1999	N	16,003	8,897	7,106	13,254	786	1,903	864	836	541	90	11,540
Academe												
1979	%	55.2	51.9	63.5	55.7	42.8	54.6	31.4	59.6	70.5	59.1	55.5
1984	%	50.7	47.4	56.7	49.9	53.1	63.9	37.6	53.1	58.6	51.4	50.1
1989	%	52.8	49.1	58.2	51.6	59.8	62.9	39.7	57.8	55.6	37.3	52.1
1994	%	52.1	46.4	59.1	52.8	45.9	49.2	38.4	55.3	59.4	68.1	52.8
1999	%	49.2	43.6	56.2	51.7	44.0	34.7	36.0	57.1	59.0	53.3	51.6
Industry/Self-Employed												
1979	%	16.9	20.6	7.5	15.2	46.4	33.5	52.4	7.7	8.0	6.8	15.5
1984	%	19.2	23.2	11.9	18.0	34.7	30.7	44.2	7.8	12.1	8.6	18.4
1989	%	20.6	26.2	12.3	19.2	32.0	31.2	45.6	7.7	17.0	29.4	19.1
1994	%	21.4	28.7	12.5	18.0	44.2	42.9	49.0	7.5	12.0	14.5	18.5
1999	%	27.8	36.3	17.1	21.9	44.5	60.4	50.1	12.2	17.6	13.3	22.2
Government												
1979	%	12.7	13.3	11.1	13.3	4.7	3.6	10.2	15.9	13.5	11.4	13.0
1984	%	11.7	12.6	9.9	12.5	4.4	1.2	11.5	14.2	15.5	14.3	12.0
1989	%	10.2	10.7	9.5	11.2	2.0	2.2	7.0	13.8	10.9	13.7	10.9
1994	%	8.7	9.9	7.3	9.6	4.6	1.7	6.2	9.6	8.9	10.1	9.5
1999	%	7.5	8.3	6.5	8.7	2.8	0.9	5.8	7.4	8.3	8.9	8.7
Other												
1979	%	15.2	14.1	18.0	15.8	6.1	8.3	5.9	16.9	8.0	22.7	16.0
1984	%	18.5	16.8	21.5	19.6	7.7	4.2	6.6	24.9	13.8	25.7	19.5
1989	%	16.4	14.1	20.0	17.9	6.3	3.6	7.6	20.7	16.4	19.6	17.8
1994	%	17.7	15.0	21.1	19.6	5.3	6.2	6.3	27.6	19.7	7.2	19.2
1999	%	15.5	11.8	20.2	17.6	8.7	3.9	8.1	23.3	15.2	24.4	17.5

†Includes Pacific Islander
‡Includes Alaskan Native

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2-1. Percentages of U.S. citizen doctorate recipients in 1999 who remained in the same state in which they w[illegible]orn, by demographic background and employment sector

	Number	Same Birth, High School, College, Doctorate, and Employment State	No Two the Same
		%	%
Total	23,153	13.4	8.7
By Sex			
Male	11,940	11.4	9.0
Female	11,213	15.6	8.4
By Race/Ethnicity			
American Indian*	173	18.5	8.1
Asian+	494	15.0	9.7
Black	1,275	18.3	6.8
Hispanic	712	22.9	4.8
White	20,216	12.7	8.9
By Marital Status			
Married/marriage-like	14,679	14.6	8.0
Separated/Widowed/Divorced	1,824	15.6	7.3
Never married	6,481	10.3	10.7
By Parents' Education			
Some college or less	8,326	19.9	3.2
Bachelor's or higher	14,669	9.8	11.8
By Employment Sector#			
Academe	8,441	12.6	8.7
Government	1,278	13.9	9.1
Private Sector	3,756	12.4	8.7
Other	2,735	27.1	5.1

*Includes Alaskan Native. +Includes Pacific Islander.
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2-2. Percentages of U.S. citizen doctorate recipients in 1999 who migrated interstate at different transition points, by demographic background and employment sector

	Number	Birth & High School	High School & College	College & Doctorate	Doctorate & Employment
		%	%	%	%
Total	23,153	34.0	36.1	68.8	55.2
By Sex					
Male	11,940	34.6	36.5	70.4	59.2
Female	11,213	33.4	35.6	67.0	50.9
By Race/Ethnicity					
American Indian*	173	33.5	30.1	62.4	57.8
Asian+	494	41.9	38.7	64.2	53.6
Black	1,275	28.2	36.8	64.5	52.2
Hispanic	712	27.1	23.9	60.1	51.1
White	20,216	34.4	36.4	69.5	55.5
By Marital Status					
Married/Marriage-like	14,679	34.0	35.0	68.0	51.8
Separated/Widowed/Divorced	1,824	32.6	31.5	64.4	50.1
Never married	6,481	34.4	39.7	71.6	64.3
By Parents' Education					
Some college or less	8,326	21.8	24.1	62.0	49.1
Bachelor's or higher	14,669	41.0	42.9	72.6	58.6
By Employment Sector#					
Academe	8,441	33.0	35.5	70.0	58.6
Government	1,278	36.6	35.4	68.8	52.5
Private Sector	3,756	35.4	36.7	67.9	54.7
Other	2,735	28.5	30.1	56.7	35.3

*Includes Alaskan Native. +Includes Pacific Islander.
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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Table 2-3. Percentages of U.S. citizen doctorate recipients in 1999 who remained in the same state at various time points prior to employment, by demographic background and employment sector

	Number	Same Birth & Employment	Same HS & Employment	Same College & Employment
		%	%	%
Total	23,153	24.0	29.2	28.3
By Sex				
Male	11,940	21.7	26.1	25.6
Female	11,213	26.4	32.5	31.1
By Race/Ethnicity				
American Indian*	173	34.1	38.2	36.4
Asian+	494	25.9	32.4	33.6
Black	1,275	30.9	35.3	33.6
Hispanic	712	38.3	44.2	43.4
White	20,216	23.0	28.2	27.2
By Marital Status				
Married/marriage-like	14,679	25.1	30.8	30.1
Separated/Widowed/Divorced	1,824	26.4	32.7	32.1
Never married	6,481	21.0	24.9	23.2
By Parents' Education				
Some college or less	8,326	31.5	36.0	35.9
Bachelor's or higher	14,669	19.8	25.4	23.9
By Employment Sector#				
Academe	8,441	23.0	28.0	27.9
Government	1,278	24.1	31.3	29.2
Private Sector	3,756	23.5	28.8	27.7
Other	2,735	40.8	48.6	46.4

*Includes Alaskan Native +Includes Pacific Islander
#The Ns for employment sector do not sum to the total N because many respondents did not have or did not report a specific job commitment at the time they completed the SED questionnaire

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

Table 2-4. Percentages of U.S. citizen doctorate recipients in 1999 who migrated interstate at different transition points, by field of study

	Number	Birth & High School	High School & College	College & Doctorate	Doctorate & Employment
		%	%	%	%
Total	23,153	34.0	36.1	68.8	55.2
Science & Engineering	12,763	35.3	37.4	71.0	59.4
Engineering	1,950	37.2	37.4	67.2	56.7
Physics/Astronomy	641	36.3	41.8	77.5	67.2
Chemistry	1,071	29.4	30.2	74.1	70.5
Earth, Atmosphere, Ocean	399	41.4	44.1	74.7	58.6
Mathematics	444	35.1	42.3	71.6	65.8
Computer Science	303	40.9	44.9	70.3	56.4
Biological Science	3,044	36.5	36.5	70.4	56.5
Agricultural Science	421	31.1	29.9	73.4	63.2
Psychology	2,673	34.2	36.6	68.7	55.2
Social Science	1,817	36.5	43.6	74.7	65.6
Non-Science & Engineering	10,390	32.1	34.2	65.6	49.4
Humanities	3,552	37.9	44.4	76.1	61.5
Other	6,838	29.0	28.5	60.6	43.2

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDICES

APPENDIX A: The Seven Basic Tables, 1999

Appendix A includes the following seven tables:

A-1 Number of Doctorate Recipients, by Sex and Subfield, 1999

A-2 Number of Doctorate Recipients, by Citizenship, Race/Ethnicity, and Subfield, 1999

A-3 Statistical Profile of Doctorate Recipients, by Major Field, 1999

A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1999

A-5 Doctorate Recipients' Financial Resources in Support of Doctoral Programs, by Broad Field and Sex, 1999

A-6 State of Doctoral Institution of Doctorate Recipients, by Broad Field and Sex, 1999

A-7 Institutions Granting Research Doctorates, by Major Field, 1999

TABLE A-1 and TABLE A-2: Tables A-1 and A-2 display data for the most recent year by subfield of doctorate. Field groupings may differ from those in reports published by Federal sponsors of the Survey of Earned Doctorates (SED). The "general" field categories—e.g., "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—e.g., "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields listed.

Table A-1 presents data by doctoral specialty and sex. Table A-2 displays doctoral specialty by citizenship and race/ethnicity. For a detailed description of the racial/ethnic variable, see the explanatory note for Table A-4.

TABLE A-3: Table A-3 is composed of three 2-page tables. The first table (A-3a) includes data on *all* research doctorate recipients from the most recent year; the other two tables (A-3b and A-3c) present the same data by sex. Field groupings may differ from those in reports published by Federal sponsors of the SED. Terms requiring definition are as follows:

— *Percentage with Master's*: The percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.

— *Median Age at Doctorate*: One-half received the doctorate at or before this age. A recipient's age is obtained by subtracting the month/year of birth from the month/year of doctorate (see note on next page).

— *Median Time Lapse*: "Total Time" refers to the total calendar time elapsed between the month/year of baccalaureate and the month/year of doctorate. "Registered Time" refers to the actual time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate.

— *Postgraduation Plans*: Each year's doctorate recipients provide information on post-graduation employment or study plans in response to items B1 through B9 on the survey form. Since the questionnaire is filled out around the time the doctorate is awarded, a recipient's plans are subject to change. However, comparisons with the longitudinal Survey of Doctorate Recipients (SDR) have shown SED data to be a reasonable indicator of actual employment status in the year following the doctorate, although results vary by sector. (The SDR is a follow-up employment survey of a sample of doctorate recipients in science, engineering, and, until 1995, humanities fields.)

In Table A-3 the postgraduation plans of doctorate recipients are grouped as follows: "Postdoctoral Study Plans" (fellowship, research internship, traineeship, other), "Planned Employment after Doctorate" (educational institution, industry, etc.), and "Postdoctoral Plans Unknown." These categories include recipients who were still negotiating or seeking positions at the time of survey completion, as well as those whose plans were definite. The sum of these lines equals 100 percent for each column, with allowance for rounding: for example, 28.0 percent of all psychology doctorate recipients had postdoctoral study plans, 54.2 percent planned to be employed, and 17.8 percent did not report their post-graduation plans, totaling 100 percent. The postdoctoral study row is further subdivided by type of study or appointment (fellowships, research associateships, traineeships, and other study). The percentages in these subdivisions sum to the percent of respondents in the given column who reported plans for postdoctoral study. The employment row is similarly subdivided by type of employer. The percentages for these rows add to percentage of respondents in the given column who planned employment. The

category for educational institutions includes elementary and secondary schools as well as colleges and universities, and the category for government includes military service.

The four lines of data beginning with "Definite Postdoctoral Study" distinguish between individuals who had definite postgraduation plans at the time of survey completion (item B1: "Am returning to, or continuing in, predoctoral employment" or "Have signed contract or made definite commitment") and those who were still seeking employment or postdoctoral study (item B1: "Am negotiating with one or more specific organizations," "Am seeking position but have no specific prospects," or "Other"). These four lines, when added to the prior line, "Postdoctoral Plans Unknown," total 100 percent with allowance for rounding. The two lines "Definite Postdoctoral Study" and "Seeking Postdoctoral Study" add to give the percentage for "Postdoctoral Study Plans"; the two lines "Definite Employment" and "Seeking Employment" add to give the percentage for "Planned Employment After Doctorate."

Percentages showing the distribution of doctorate recipients by postdoctoral work activity and region of employment are based only on the number of recipients who had *definite employment commitments* at the time they completed the questionnaire. These percentages exclude recipients who planned postdoctoral study (as described above) and recipients who were still *seeking* employment at the time they completed the questionnaire. (Note that the rows on specific postdoctoral study and employment plans discussed earlier include individuals whose plans were *not definite*.)

The U.S. regions of employment shown in Table A-3 include the following states and territories:

New England:	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Middle Atlantic:	New Jersey, New York, Pennsylvania
East North Central:	Illinois, Indiana, Michigan, Ohio, Wisconsin
West North Central:	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South Atlantic:	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
East South Central:	Alabama, Kentucky, Mississippi, Tennessee

West South Central:	Arkansas, Louisiana, Oklahoma, Texas
Mountain:	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
Pacific & Insular:	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Guam, Puerto Rico, Trust Territory, Virgin Islands

TABLE A-4: Table A-4 contains data by race/ethnicity and citizenship for selected variables included in Tables A-3 and A-5. Field groupings may differ from those in reports published by Federal sponsors of the SED.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in Federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977.* (Note: Changes in the OMB guidelines prompted the reclassification of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the item was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic to provide more detail for users of the racial/ethnic data; and (2) respondents were asked to check only one racial category. (Before 1980, doctorate recipients could check more than one category to indicate their race.)

The item was modified again in 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first indicate whether or not they are Hispanic, and then check one of the four racial group categories (American Indian, Asian, black, or white). In Table A-4, doctorate recipients who reported Hispanic heritage, regardless of racial designation, are included in one of three Hispanic groups: Puerto Rican, Mexican American, or other Hispanic. The remaining survey respondents are then counted in the respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

In the section of "Doctoral Program Support" a recipient counts in more than one category if support was received from multiple sources. Because a student counts more than once

for sources of support, the vertical percentages sum to more than 100 percent. See the explanatory note on Appendix Table A-5 for further detail. (Data on the *primary* source of support for doctorate recipients are presented in the body of the report.)

The other sections in Table A-4 correspond to many of those in Appendix Table A-3. The reader is referred to the explanatory note on Table A-3 for additional information.

TABLE A-5: Table A-5 displays data reported in item A11 on financial resources used in support of the respondent's doctoral program, by broad field and sex of recipient. Field groupings may differ from those in reports published by Federal sponsors of the SED.

A recipient counts in more than one category in Table A-5 if more than one financial resource was reported. Because a student counts once for each of his/her financial resources, the vertical percentages sum to more than 100 percent. (Data on the *primary* financial resources for doctorate recipients are presented in the body of the report.) Please consult Appendix C: Technical Notes for additional information on changes in the coding of Sources of Support/Financial Resources.

TABLE A-6: Table A-6 shows, by broad field and sex, the number of persons receiving a research doctorate in the most recent year from institutions in each of the 50 states, the District of Columbia, and Puerto Rico. Field groupings may differ from those in reports published by Federal sponsors of the SED. See Appendix E of the Summary Report for a description of field groupings as reported in this table; see the questionnaire's Specialties List in Appendix D of the Summary Report for the names and codes of the subfields included.

TABLE A-7: Table A-7 displays data by doctorate-granting institution and major field. It includes all institutions in the United States (the 50 states, the District of Columbia, and Puerto Rico) that awarded research doctoral degrees in the most recent year, except Arkansas State University which did not participate. Field groupings may differ from those in reports published by Federal sponsors of the SED and from departmental designations at institutions.

APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield, 1999

Subfield of Doctorate	Number of Doctorates Total	Men	Women
TOTAL ALL FIELDS*	41,140	23,460	17,493
PHYSICAL SCIENCES	6,324	4,821	1,474
MATHEMATICS	1,085	805	277
Applied Mathematics	252	193	59
Algebra	84	58	25
Analysis & Functional Analysis	87	68	19
Geometry	65	49	16
Logic	23	18	5
Number Theory	50	38	12
Mathematical Statistics	174	128	46
Topology	65	50	15
Computing Theory & Practice	14	11	3
Operations Research	21	12	9
Mathematics, General	117	93	22
Mathematics, Other	133	87	46
COMPUTER SCIENCE	850	687	156
Computer Science	735	609	119
Information Sciences & Systems	115	78	37
PHYSICS & ASTRONOMY	1,431	1,231	192
Astronomy	60	43	17
Astrophysics	100	85	15
Acoustics	16	15	1
Chemical & Atomic/Molecular	99	85	14
Elementary Particles	169	152	17
Fluids	23	19	2
Nuclear	76	67	9
Optics	97	84	12
Plasma & High-Temperature	49	47	2
Polymer	28	21	7
Solid State & Low-Temperature	308	266	42
Physics, General	205	177	23
Physics, Other	201	170	31
CHEMISTRY	2,134	1,494	633
Analytical	333	225	108
Inorganic	279	189	90
Nuclear	10	9	1
Organic	564	399	163
Medicinal/Pharmaceutical	132	81	51
Physical	310	235	75
Polymer	95	64	31
Theoretical	56	47	9
Chemistry, General	196	139	52
Chemistry, Other	159	106	53
EARTH, ATMOS., & MARINE SCI	824	604	216
Atmospheric Physics & Chemistry	43	32	11
Atmospheric Dynamics	16	12	4
Meteorology	22	21	1
Atmos. Sci./Meteorology, General	33	29	3
Atmos. Sci./Meteorology, Other	10	7	3
Geology	158	117	41
Geochemistry	55	34	21
Geophysics & Seismology	100	84	15
Paleontology	15	11	4
Mineralogy, Petrology	14	11	3
Stratigraphy, Sedimentation	17	14	3
Geomorphology & Glacial Geology	18	9	9
Geological & Related Sci., General	9	7	1
Geological & Related Sci., Other	35	25	10
Environmental Science	100	68	31
Hydrology & Water Resources	32	27	5
Oceanography	100	64	36
Marine Sciences	30	21	9
Misc. Physical Sciences, Other	17	11	6
ENGINEERING	5,337	4,503	791
Aerospace, Aeronautic., Astronautic.	207	189	17
Agricultural	59	47	12
Bioengineering & Biomedical	245	181	63
Ceramic Sciences	33	24	9
Chemical	580	477	102
Civil	507	430	76
Communications	38	32	6
Computer	206	171	33
Electrical, Electronics	1,233	1,105	117
Engineering Mechanics	68	56	11
Engineering Physics	28	24	4
Engineering Science	51	46	4
Environmental Health Engineering	78	65	13
Industrial/Manufacturing	209	166	43
Materials Science	394	316	75
Mechanical	785	693	84
Metallurgical	43	37	4
Mining & Mineral	18	16	2
Nuclear	77	69	8
Ocean	16	15	1
Operations Research	67	51	16
Petroleum	45	40	5
Polymer/Plastics	53	36	17
Systems	42	34	7
Engineering, General	39	32	4
Engineering, Other	216	151	58
LIFE SCIENCES	8,126	4,473	3,620
BIOLOGICAL SCIENCES	5,600	3,181	2,400
Biochemistry	763	451	310
Biomedical Sciences	177	101	72
Biophysics	173	124	49
Biotechnology Research	19	17	2
Bacteriology	13	7	6
Plant Genetics	31	22	9
Plant Pathology	36	24	12
Plant Physiology	54	31	23
Botany, Other	68	42	26
Anatomy	33	17	16
Biometrics and Biostatistics	76	39	36
Cell Biology	285	148	136
Ecology	272	150	121
Developmental Biology/Embryology	108	54	54
Endocrinology	19	10	9
Entomology	113	77	36
Biological Immunology	223	123	100
Molecular Biology	719	419	299
Microbiology	382	218	163
Neuroscience	437	253	183
Nutritional Sciences	104	34	69
Parasitology	13	7	6
Toxicology	115	62	53
Human & Animal Genetics	217	110	106
Human & Animal Pathology	120	65	54
Human & Animal Pharmacology	254	141	113
Human & Animal Physiology	243	134	108
Zoology, Other	126	79	47
Biological Sciences, General	182	104	75
Biological Sciences, Other	225	118	107
HEALTH SCIENCES	1,410	499	901
Speech-Lang. Pathology & Audiology	86	31	55
Environmental Health	69	39	28
Health Systems/Services Admin.	62	22	38
Public Health	171	57	112
Epidemiology	180	67	112
Exercise Physiology/Sci., Kinesiology	104	70	34
Nursing	358	15	340
Pharmacy	137	82	55
Rehabilitation/Therapeutic Services	26	6	20
Veterinary Medicine	49	27	22
Health Sciences, General	32	13	19
Health Sciences, Other	136	70	66
AGRICULTURAL SCIENCES	1,116	793	319
Agricultural Economics	149	110	39
Agricultural Business & Management	2	2	0
Animal Breeding & Genetics	21	14	7
Animal Nutrition	46	34	12
Dairy Science	12	7	5
Poultry Science	8	4	2
Fisheries Science & Management	38	31	7
Animal Sciences, Other	71	48	23
Agronomy & Crop Science	106	90	16
Plant Breeding & Genetics	44	31	13
Plant Pathology	66	39	27
Plant Sciences, Other	38	26	12
Food Engineering	7	5	2
Food Sciences, Other	137	70	67
Soil Chemistry/Microbiology	29	21	8
Soil Sciences, Other	67	55	11
Horticulture Science	66	50	16
Forest Biology	14	10	4
Forest Engineering	1	1	0
Forest Management	17	14	3

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-1. Number of doctorate recipients, by sex and subfield, 1999

Subfield of Doctorate	Number of Doctorates		
	Total	Men	Women
Wood Sci. & Pulp/Paper Tech	21	15	6
Conservation/Renewable Nat. Res.	25	16	9
Forestry & Related Sci., Other	49	32	16
Wildlife/Range Management	44	36	8
Agricultural Sciences, General	8	8	0
Agricultural Sciences, Other	30	24	6
SOCIAL SCIENCES (INCL. PSYCH.)	7,036	3,194	3,819
Anthropology	461	200	261
Area Studies	11	8	3
Criminology	51	31	20
Demography/Population Studies	28	10	17
Economics	912	661	247
Econometrics	15	10	5
Geography	144	95	49
International Relations/Affairs	120	81	38
Political Science and Government	653	435	215
Public Policy Analysis	124	68	55
Sociology	543	218	324
Statistics	72	49	21
Urban Affairs/Studies	57	40	17
Social Sciences, General	25	11	14
Social Sciences, Other	153	67	86
PSYCHOLOGY	3,667	1,210	2,447
Clinical	1,449	408	1,040
Cognitive & Psycholinguistics	143	73	70
Comparative	11	4	7
Counseling	461	165	296
Developmental and Child	193	44	149
Human/Indv. & Family Development	130	23	107
Experimental	137	73	64
Educational	66	20	45
Family & Marriage Counseling	55	17	38
Industrial & Organizational	158	59	99
Personality	16	5	11
Physiological/Psychobiology	87	37	50
Psychometrics	15	13	2
Quantitative	14	7	7
School	120	32	88
Social	175	60	114
Psychology, General	229	97	125
Psychology, Other	208	73	135
HUMANITIES	5,468	2,777	2,658
History, American	418	253	165
History, Asian	68	45	23
History, European	235	144	91
History/Philosophy of Sci. & Tech.	49	31	18
History, General	76	50	26
History, Other	165	88	77
Classics	77	46	31
Comparative Literature	166	67	98
Linguistics	250	99	147
Speech & Rhetorical Studies	150	65	85
Letters, General	19	6	13
Letters, Other	83	30	53
American Studies	98	40	56
Archeology	26	14	12
Art History/Criticism/Conservation	189	56	132
Music	769	426	323
Philosophy	387	290	96
Religion	337	255	82
Drama/Theater Arts	99	50	49
LANGUAGE & LITERATURE	1,652	661	988
American	372	147	225
English	652	271	379
French	149	44	105
German	90	32	58
Italian	20	7	13
Spanish	201	81	120
Russian	26	9	17
Slavic	17	10	7
Chinese	27	10	17
Japanese	10	6	4
Hebrew	4	2	2
Arabic	12	7	5
Other Language & Literature	72	35	36
Humanities, General	24	10	14
Humanities, Other	131	51	79
EDUCATION	6,557	2,344	4,196
Curriculum & Instruction	996	280	712
Educational Admin. & Supervision	897	361	536
Educational Leadership	1,150	456	693
Educ./Instruct. Media Design	123	69	54
Educ. Stat./Research Methods	57	23	33
Educ. Assess., Test., & Meas.	39	20	19
Educational Psychology	298	80	218
School Psychology	109	19	90
Social/Phil. Found. Of Educ.	125	60	65
Special Education	263	58	204
Counseling Educ./Couns. & Guidance	261	97	164
Higher Educ./Evaluation & Research	464	182	281
Pre-elementary/Early Childhood	49	4	45
Elementary Education	59	12	47
Secondary Education	31	12	19
Adult & Continuing Education	153	62	90
TEACHING FIELDS	891	359	529
Agricultural Education	38	24	14
Art Education	47	16	31
Business Education	45	14	30
English Education	64	13	51
Foreign Languages Education	62	17	45
Health Education	58	18	40
Home Economics Education	10	2	8
Technical/Industrial Arts Education	21	15	6
Mathematics Education	101	38	62
Music Education	79	37	41
Nursing Education	22	3	19
Physical Education and Coaching	114	63	51
Reading Education	68	9	59
Science Education	58	30	28
Social Science Education	9	7	2
Technical Education	27	21	6
Trade & Industrial Education	14	11	3
Teacher Ed./Spec. Acad. & Voc., Other	54	21	33
Education, General	199	57	137
Education, Other	393	133	260
PROFESSIONAL/OTHER FIELDS	2,292	1,348	935
BUSINESS AND MANAGEMENT	1,104	756	342
Accounting	153	92	60
Banking/Financial Support Services	75	62	13
Business Admin. & Management	311	228	80
Business/Managerial Economics	42	32	10
International Business	34	26	8
Mgmt. Info. Sys./Bus. Data Proc.	83	59	24
Marketing Management & Research	127	89	38
Operations Research	52	45	7
Organizational Behavior	100	42	58
Bus. Mgmt./Admin. Serv., General	50	31	17
Bus. Mgmt./Admin. Serv., Other	77	50	27
COMMUNICATIONS	379	181	197
Communications Research	50	28	22
Mass Communications	153	78	74
Communications Theory	47	20	27
Communications, General	69	28	41
Communications, Other	60	27	33
OTHER PROFESSIONAL FIELDS	781	396	384
Architectural Environmental Design	65	45	20
Home Economics	23	6	17
Law	37	26	10
Library Science	39	10	29
Parks/Recreation/Leisure/Fitness	29	17	12
Public Administration	119	71	48
Social Work	229	58	171
Theology/Religious Education	168	130	38
Professional Fields, General	9	2	7
Professional Fields, Other	63	31	32
OTHER/UNKNOWN FIELDS	28	15	12

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.
*Grand totals include 187 doctorate recipients whose gender was unknown and 28 doctorate recipients whose doctoral field was unknown.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-2. Number of doctorate recipients by citizenship, race/ethnicity, and subfield: 1999

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Permanent Residents: Total	American Indian†	Asian‡	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
TOTAL ALL FIELDS	41,140	9,068	29,922	219	2,518	1,729	23,725	292	344	610	485
PHYSICAL SCIENCES	6,324	2,146	3,872	18	441	110	3,115	21	29	46	82
MATHEMATICS	1,085	444	605	1	59	12	506	2	1	6	12
Applied Mathematics	252	108	140	0	20	6	109	1	1	1	2
Algebra	84	29	55	1	3	1	47	1	1	0	1
Analysis & Functional Analysis	87	35	52	0	4	1	46	0	0	0	1
Geometry	65	25	40	0	5	0	32	0	1	1	1
Logic	23	12	11	0	0	0	10	0	0	1	0
Number Theory	50	18	32	0	4	2	22	0	1	2	1
Mathematical Statistics	174	84	89	0	10	1	75	0	1	0	2
Topology	65	26	39	0	4	0	32	0	2	0	1
Computing Theory & Practice	14	3	11	0	1	0	10	0	0	0	0
Operations Research	21	8	13	0	1	0	12	0	0	0	0
Mathematics, General	117	44	44	0	3	1	37	0	0	0	3
Mathematics, Other	133	52	79	0	4	0	74	0	0	1	0
COMPUTER SCIENCE	850	330	483	1	86	18	348	6	1	7	16
Computer Science	735	308	401	1	74	10	288	5	1	7	15
Information Sciences & Systems	115	22	82	0	12	8	60	1	0	0	1
PHYSICS & ASTRONOMY	431	501	851	5	70	10	732	3	7	5	19
Astronomy	60	14	42	0	0	2	39	0	0	0	1
Astrophysics	100	25	74	2	3	0	69	0	0	0	0
Acoustics	16	1	14	0	0	0	11	1	0	0	2
Chemical & Atomic/Molecular	99	33	64	0	2	0	58	0	1	0	3
Elementary Particle	169	65	102	1	10	0	87	1	1	0	2
Fluids	23	7	13	0	0	0	12	0	0	0	1
Nuclear	76	33	43	0	2	0	41	0	0	0	0
Optics	97	32	60	0	4	2	51	0	0	1	2
Plasma & High-Temperature	49	16	32	0	4	0	26	0	1	0	1
Polymer	28	13	15	0	1	0	14	0	0	0	0
Solid State & Low-Temperature	308	141	165	0	18	2	138	1	2	2	2
Physics, General	205	55	97	2	11	1	79	0	1	1	2
Physics, Other	201	66	130	0	15	3	107	0	1	1	3
CHEMISTRY	2,134	624	1,400	5	187	56	1,088	15	9	18	22
Analytical	333	78	252	1	28	10	204	4	2	3	0
Inorganic	279	62	214	0	20	12	174	1	3	3	1
Nuclear	10	2	8	0	0	1	6	0	0	1	0
Organic	564	178	374	1	59	17	279	3	3	3	9
Medicinal/Pharmaceutical	132	46	80	0	23	2	51	1	0	1	2
Physical	310	92	207	0	21	5	171	2	0	4	4
Polymer	95	38	57	0	6	4	47	0	0	0	0
Theoretical	56	19	37	0	6	1	30	0	0	0	0
Chemistry, General	196	51	77	1	12	2	55	1	0	2	4
Chemistry, Other	159	58	94	2	12	2	71	3	1	1	2
EARTH, ATMOS., & MARINE SCIENCE	824	247	533	6	39	14	441	5	5	10	13
Atmospheric Physics & Chem	43	18	23	0	2	2	18	0	0	1	0
Atmospheric Dynamics	16	8	8	0	0	0	7	1	0	0	0
Meteorology	22	5	16	0	3	0	13	0	0	0	0
Atmos.Sci./Meteorology, General	33	11	19	0	2	0	16	0	0	1	0
Atmos.Sci./Meteorology, Other	10	0	10	0	2	0	8	0	0	0	0
Geology	158	48	102	3	6	2	84	0	3	2	2
Geochemistry	55	22	33	0	4	1	26	0	0	0	2
Geophysics & Seismology	100	34	62	0	5	1	53	0	1	1	1
Paleontology	15	1	14	0	2	0	10	0	1	0	1
Mineralogy, Petrology	14	7	7	0	0	0	6	0	0	0	1
Stratigraphy, Sedimentation	17	5	12	0	0	0	12	0	0	0	0
Geomorphology & Glacial Geol	18	3	15	1	0	0	13	0	0	0	1
Geological & Related Sci., General	9	2	5	1	0	0	3	0	0	1	0
Geological & Related Sci., Other	35	11	23	0	1	0	18	1	0	1	2
Environmental Science	100	27	64	0	4	3	56	0	0	0	1
Hydrology & Water Resources	32	9	21	1	2	2	16	0	0	0	0
Oceanography	100	27	63	0	5	2	51	1	0	3	1
Marine Sciences	30	4	24	0	1	1	20	2	0	0	0
Misc. Physical Sciences, Other	17	5	12	0	0	0	11	0	0	0	1
ENGINEERING	5,337	2,193	2,873	12	515	96	2,101	23	13	46	67
Aerospace, Aeronautic., Astronautic	207	83	111	0	13	1	96	0	0	0	1
Agricultural	59	35	24	0	4	1	19	0	0	0	0
Bioengineering & Biomedical	245	62	168	1	31	8	122	0	1	3	2
Ceramic Science	33	16	16	0	1	2	12	0	0	0	1
Chemical	580	224	338	2	51	10	263	2	0	5	5
Civil	507	225	267	2	38	5	208	2	2	7	3
Communications	38	20	18	0	4	1	11	0	0	0	2
Computer	206	93	98	0	31	5	56	0	0	2	4
Electrical & Electronics	1,233	523	646	1	137	23	441	11	4	12	17
Engineering Mechanics	68	30	35	0	4	1	30	0	0	0	0
Engineering Physics	28	6	21	0	4	0	16	0	0	1	0
Engineering Science	51	21	27	1	3	1	19	0	1	1	1
Environmental Health Engineering	78	28	43	0	8	1	32	0	1	0	1
Industrial/Manufacturing	209	108	99	0	7	7	80	1	1	2	1
Materials Science	394	159	220	2	49	3	153	3	1	4	5

APPENDIX TABLE A-2. Number of doctorate recipients by citizenship, race/ethnicity, and subfield, 1999

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp Visas	U.S. Citizens and Permanent Residents Total	American Indian†	Asian†	Black	White	Puerto Rican	Mexican	Other Hispanic	Unkn Race
Mechanical	785	323	425	2	85	11	304	2	1	6	14
Metallurgical	43	20	21	0	2	1	18	0	0	0	0
Mining & Mineral	18	12	6	0	1	0	5	0	0	0	0
Nuclear	77	26	49	0	9	3	36	0	0	0	1
Ocean	16	4	11	0	2	0	9	0	0	0	0
Operations Research	67	29	38	1	7	0	28	1	0	0	1
Petroleum	45	36	8	0	3	0	5	0	0	0	0
Polymer/Plastics	53	24	28	0	6	1	19	0	0	0	2
Systems	42	17	18	0	1	4	13	0	0	0	0
Engineering, General	39	7	15	0	1	0	12	0	0	0	2
Engineering, Other	216	62	123	0	13	7	94	1	1	3	4
LIFE SCIENCES	8,126	2,109	5,726	28	765	203	4,433	51	60	115	81
BIOLOGICAL SCIENCES	5,600	1,286	4,118	20	619	116	3,139	39	41	84	60
Biochemistry	763	214	524	1	88	10	403	3	4	9	6
Biomedical Sciences	177	36	124	0	24	3	87	1	0	2	7
Biophysics	173	51	120	1	29	3	80	0	0	3	4
Biotechnology Research	19	6	13	0	5	1	7	0	0	0	0
Bacteriology	13	1	12	0	1	0	11	0	0	0	0
Plant Genetics	31	14	17	0	2	0	14	0	0	1	0
Plant Pathology	36	14	19	0	3	0	14	1	1	0	0
Plant Physiology	54	17	36	1	2	0	26	0	1	5	1
Botany, Other	68	13	53	0	2	1	46	0	2	1	1
Anatomy	33	9	21	0	2	0	17	1	0	1	0
Biometrics and Biostatistics	76	24	43	0	8	6	29	0	0	0	0
Cell Biology	285	60	218	0	43	9	159	3	0	2	2
Ecology	272	37	228	1	4	3	212	3	1	2	2
Developmental Biology/Embryology	108	28	78	0	15	1	55	2	3	2	0
Endocrinology	19	5	14	0	2	0	12	0	0	0	0
Entomology	113	34	79	0	6	0	63	2	0	6	2
Biological Immunology	223	45	177	1	30	4	135	2	0	4	1
Molecular Biology	719	190	518	2	120	20	352	4	2	11	7
Microbiology	382	74	293	1	51	12	221	2	2	3	1
Neuroscience	437	76	350	2	47	4	264	6	6	11	8
Nutritional Sciences	104	33	65	1	5	5	48	1	1	3	1
Parasitology	13	2	11	0	1	1	8	0	0	0	1
Toxicology	115	22	92	2	12	1	75	1	0	1	0
Human & Animal Genetics	217	49	157	3	17	3	127	1	1	3	2
Human & Animal Pathology	120	26	89	1	16	3	68	0	0	0	1
Human & Animal Pharmacology	254	57	190	1	22	11	149	0	3	3	1
Human & Animal Physiology	243	52	182	1	27	7	137	1	3	3	3
Zoology, Other	126	16	106	0	5	1	92	1	2	4	1
Biological Sciences, General	182	35	113	0	16	2	86	0	5	3	1
Biological Sciences, Other	225	46	176	1	14	5	142	4	2	1	7
HEALTH SCIENCES	1,410	287	1,043	6	85	57	836	11	16	19	13
Speech-Lang. Pathology & Audiology	86	17	64	0	1	3	55	1	1	1	2
Environmental Health	69	16	44	0	7	2	33	0	1	1	0
Health Systems/Services Admin.	62	13	42	0	5	4	31	1	1	0	0
Public Health	171	24	135	0	11	5	107	1	4	5	2
Epidemiology	180	29	142	0	14	7	110	1	5	4	1
Exercise Physiology/Sci., Kinesiology	104	18	83	0	7	2	71	2	1	0	0
Nursing	358	39	306	6	8	20	262	3	3	2	2
Pharmacy	137	63	64	0	14	5	42	0	0	1	2
Rehabilitation/Therapeutic Services	26	5	21	0	2	2	17	0	0	0	0
Veterinary Medicine	49	28	21	0	1	1	15	1	0	2	1
Health Sciences, General	32	3	29	0	5	2	21	1	0	0	0
Health Sciences, Other	136	32	92	0	10	4	72	0	0	3	3
AGRICULTURAL SCIENCES	1,116	536	565	2	51	30	458	1	3	12	8
Agricultural Economics	149	75	74	0	6	6	60	0	0	1	1
Agricultural Business & Management	2	2	0	0	0	0	0	0	0	0	0
Animal Breeding & Genetics	21	10	11	0	3	0	8	0	0	0	0
Animal Nutrition	46	19	27	0	1	2	23	0	1	0	0
Dairy Science	12	5	7	0	1	0	5	0	1	0	0
Poultry Science	8	4	2	0	0	0	2	0	0	0	0
Animal Sciences, Other	71	25	44	0	3	0	38	1	0	1	1
Agronomy & Crop Science	106	60	45	0	4	4	37	0	0	0	0
Plant Breeding & Genetics	44	25	18	0	1	1	14	0	0	2	0
Plant Pathology	66	40	25	0	4	1	17	0	0	2	0
Plant Sciences, Other	38	24	14	0	1	2	11	0	0	0	0
Food Engineering	7	4	3	0	1	0	2	0	0	0	0
Food Sciences, Other	137	79	58	1	10	3	40	0	0	4	0
Soil Chemistry/Microbiology	29	11	18	0	1	1	15	0	0	0	1
Soil Sciences, Other	67	30	36	1	2	5	27	0	0	0	1
Horticulture Science	66	40	25	0	5	0	19	0	0	0	1
Fisheries Science & Management	38	12	25	0	2	1	20	0	0	2	0
Forest Biology	14	7	7	0	0	0	7	0	0	0	0
Forest Engineering	1	1	0	0	0	0	0	0	0	0	0
Forest Management	17	4	13	0	0	0	13	0	0	0	0
Wood Sci. & Pulp/Paper Tech.	21	10	9	0	1	2	6	0	0	0	0
Conservation/Renewable Nat. Res.	25	7	18	0	0	0	17	0	0	0	1
Forestry & Related Sci., Other	49	20	26	0	0	0	26	0	0	0	0
Wildlife/Range Management	44	9	35	0	2	0	32	0	1	0	0
Agricultural Sciences, General	8	2	6	0	0	1	4	0	0	0	1
Agricultural Sciences, Other	30	11	19	0	3	1	15	0	0	0	0

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APPENDIX TABLE A-2. Number of doctorate recipients by citizenship, race/ethnicity, and subfield, 1999

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Permanent Residents								
			Total	American Indian†	Asian‡	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
SOCIAL SCIENCES (INCL. PSYCH.)	7,036	969	5,610	60	299	334	4,538	65	70	165	79
Anthropology	461	56	380	8	19	16	312	3	3	6	13
Area Studies	11	3	8	0	1	0	6	0	0	0	1
Criminology	51	3	48	0	2	4	38	1	0	1	2
Demography/Population Studies	28	5	18	0	2	0	15	0	0	1	0
Economics	912	410	459	1	57	23	351	2	4	12	9
Econometrics	15	7	8	0	2	0	4	0	2	0	0
Geography	144	25	115	1	3	4	99	1	1	1	5
International Relations/Affairs	120	30	82	0	5	4	69	0	1	1	2
Political Science and Government	653	93	530	6	26	34	424	3	9	10	18
Public Policy Analysis	124	21	91	0	9	8	73	0	1	0	0
Sociology	543	72	438	4	28	47	331	4	5	16	3
Statistics	72	47	16	0	2	0	13	0	0	1	0
Urban Affairs/Studies	57	11	44	3	3	7	27	1	0	2	1
Social Sciences, General	25	9	16	0	0	2	14	0	0	0	0
Social Sciences, Other	153	23	127	1	11	12	97	1	0	5	0
PSYCHOLOGY	3,667	154	3,230	36	129	173	2,665	49	44	109	25
Clinical	1,449	23	1,288	15	62	61	1,025	26	19	72	8
Cognitive & Psycholinguistics	143	22	119	2	2	3	106	0	3	2	1
Comparative	11	0	11	0	0	0	10	1	0	0	0
Counseling	461	10	445	5	13	38	366	4	7	8	4
Developmental and Child	193	15	175	0	16	13	140	2	2	1	1
Human/Indv. & Family Development	130	16	112	2	2	4	98	0	2	1	3
Experimental	137	8	127	0	7	6	112	0	0	2	0
Educational	66	3	59	0	2	8	48	0	0	1	0
Family & Marriage Counseling	55	5	48	1	0	1	45	0	1	0	0
Industrial & Organizational	158	6	143	1	5	3	123	4	2	5	0
Personality	16	2	14	0	1	2	11	0	0	0	0
Physiological/Psychobiology	87	5	81	1	4	2	67	0	2	4	1
Psychometrics	15	3	11	0	0	0	10	0	0	0	1
Quantitative	14	1	13	0	1	0	11	1	0	0	0
School	120	4	116	3	2	3	104	1	0	3	0
Social	175	12	160	0	7	15	135	2	0	1	0
Psychology, General	229	6	124	1	3	1	102	5	2	6	4
Psychology, Other	208	13	184	5	2	13	152	3	4	3	2
HUMANITIES	5,468	640	4,576	25	216	188	3,656	34	52	123	82
History, American	418	19	395	3	14	16	344	1	8	2	7
History, Asian	68	18	49	0	15	0	34	0	0	0	0
History, European	235	15	220	0	3	0	205	0	1	5	6
History/Philosophy of Sci. & Tech.	49	4	41	0	3	1	35	0	0	0	2
History, General	76	6	43	0	2	2	33	1	0	0	5
History, Other	165	17	147	1	4	12	115	2	1	7	5
Classics	77	9	68	2	1	1	63	0	1	0	0
Comparative Literature	166	29	128	0	5	7	97	2	1	10	6
Linguistics	250	85	154	1	13	4	121	4	5	4	2
Speech & Rhetorical Studies	150	4	144	1	2	5	130	0	1	1	4
Letters, General	19	0	19	0	0	0	18	0	0	0	1
Letters, Other	83	5	78	1	1	6	67	1	0	2	0
American Studies	98	5	86	3	3	14	63	0	1	2	0
Archaeology	26	6	18	0	1	0	16	0	0	0	1
Art History/Criticism/Conservation	189	17	167	1	10	3	149	0	1	2	1
Music	769	112	594	2	36	24	515	1	3	8	5
Philosophy	387	58	311	4	11	2	281	0	1	6	6
Religion	337	24	301	1	25	12	254	0	3	2	4
Drama/Theater Arts	99	12	83	0	2	7	72	1	0	1	0
LANGUAGE & LITERATURE	1,652	185	1,405	5	59	60	1,148	20	23	69	21
American	372	18	351	1	12	29	294	1	8	4	2
English Literature	518	38	480	1	17	11	434	1	6	7	3
English Language	134	12	88	0	2	2	73	0	1	5	5
French	149	18	129	0	7	7	108	3	0	2	2
German	90	14	73	0	2	1	69	0	0	0	1
Italian	20	4	16	0	0	0	16	0	0	0	0
Spanish	201	49	145	1	2	3	68	15	7	46	3
Russian	26	3	23	0	2	1	20	0	0	0	0
Slavic	17	2	14	0	1	0	13	0	0	0	0
Chinese	27	8	18	0	8	0	9	0	0	0	1
Japanese	10	1	9	0	1	1	6	0	0	0	1
Hebrew	4	0	4	0	0	0	4	0	0	0	0
Arabic	12	5	7	0	0	0	7	0	0	0	0
Other Language & Literature	72	13	48	2	5	5	27	0	1	5	3
Humanities, General	24	0	22	0	0	1	17	1	0	1	2
Humanities, Other	131	10	103	0	6	11	79	0	2	1	4
EDUCATION	6,557	519	5,609	60	170	650	4,392	70	101	95	71
Curriculum & Instruction	996	96	861	10	14	91	682	21	19	17	7
Educational Admin. & Supervision	897	33	826	4	15	125	635	11	11	12	13
Educational Leadership	1,150	35	1,001	13	24	143	760	7	25	19	10
Educ./Instruct. Media Design	123	20	100	2	8	2	86	0	0	2	0
Educ. Stat./Research Methods	57	10	46	0	5	3	36	1	0	1	0
Educ. Assess., Test., & Meas.	39	12	26	0	1	3	22	0	0	0	0

APPENDIX TABLE A-2. Number of doctorate recipients by citizenship, race/ethnicity, and subfield, 1999

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Permanent Residents							
			Total	American Indian†	Asian‡	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
Educational Psychology	298	32	247	1	13	12	206	2	3	4	6
School Psychology	109	6	99	0	2	5	87	1	0	3	1
Social/Phil. Found. Of Educ.	125	16	107	1	9	25	68	0	2	0	2
Special Education	263	18	230	1	7	24	183	4	2	6	3
Counseling Educ./Couns. & Guidance	261	9	240	5	1	22	198	6	0	5	3
Higher Educ./Evaluation & Research	464	28	409	6	13	62	302	3	12	5	6
Pre-elementary/Early Childhood	49	5	38	0	2	8	22	1	1	2	2
Elementary Education	59	8	51	1	1	5	42	0	1	0	1
Secondary Education	31	2	27	1	2	2	20	0	1	1	0
Adult & Continuing Education	153	11	134	0	2	17	113	0	0	1	1
TEACHING FIELDS	891	125	737	9	26	56	609	6	13	7	11
Agricultural Education	38	4	34	2	0	3	27	0	2	0	0
Art Education	47	12	35	0	2	1	30	0	0	1	1
Business Education	45	2	37	0	1	5	27	0	1	1	2
English Education	64	9	55	1	0	8	44	1	1	0	0
Foreign Languages Education	62	23	38	0	6	2	27	0	3	0	0
Health Education	58	3	51	1	1	6	41	0	1	1	0
Home Economics Education	10	5	5	0	0	0	3	0	1	0	1
Technical/Industrial Arts Education	21	2	19	0	0	4	15	0	0	0	0
Mathematics Education	101	13	85	2	7	3	70	0	0	1	2
Music Education	79	10	68	0	1	3	62	0	0	0	2
Nursing Education	22	1	20	1	0	1	18	0	0	0	0
Physical Education and Coaching	114	14	94	1	1	3	85	0	2	1	1
Reading Education	68	5	62	0	2	6	51	1	1	1	0
Science Education	58	7	50	1	1	4	41	2	1	0	0
Social Science Education	9	0	9	0	0	1	8	0	0	0	0
Technical Education	27	5	20	0	1	2	16	0	0	0	1
Trade & Industrial Education	14	6	7	0	1	1	5	0	0	0	0
Teacher Ed./Spec. Acad. & Voc., Other	54	4	48	0	2	3	39	2	0	1	1
Education, General	199	14	90	3	7	7	69	1	1	1	1
Education, Other	393	39	340	3	18	38	252	6	10	9	4
PROFESSIONAL/OTHER FIELDS	2,292	492	1,656	16	122	148	1,290	18	19	20	23
BUSINESS AND MANAGEMENT	1,104	289	761	5	63	58	611	5	6	5	8
Accounting	153	29	121	0	13	11	94	1	1	1	0
Banking/Financial Support Services	75	30	45	1	4	3	36	1	0	0	0
Business Admin. & Management	311	71	218	1	16	22	174	1	1	1	2
Business/Managerial Economics	42	13	27	0	2	1	24	0	0	0	0
International Business	34	10	22	1	2	1	17	0	0	0	1
Mgmt. Info. Sys./Bus. Data Proc.	83	23	59	1	6	2	47	0	2	0	1
Marketing Management & Research	127	44	82	0	8	0	72	0	0	1	1
Operations Research	52	25	26	0	5	0	20	0	0	1	0
Organizational Behavior	100	9	89	0	3	10	71	2	1	1	1
Bus. Mgmt./Admin. Serv., General	50	11	21	0	0	3	17	0	0	1	0
Bus. Mgmt./Admin. Serv., Other	77	24	51	1	4	5	39	0	1	0	1
COMMUNICATIONS	379	66	297	3	17	28	235	3	2	4	5
Communications Research	50	8	42	0	2	6	34	0	0	0	0
Mass Communications	153	38	113	2	8	11	87	1	1	2	1
Communications Theory	47	2	45	0	3	2	40	0	0	0	0
Communications, General	69	8	47	1	1	3	38	0	1	1	2
Communications, Other	60	10	50	0	3	6	36	2	0	1	2
OTHER PROFESSIONAL FIELDS	781	135	588	8	41	61	438	10	10	11	9
Architectural Environmental Design	65	21	36	0	3	0	28	1	0	2	2
Home Economics	23	6	16	1	0	2	12	0	1	0	0
Law	37	14	17	1	2	3	9	0	0	0	2
Library Science	39	7	31	1	4	3	22	0	0	1	0
Parks/Recreation/Leisure/Fitness	29	10	18	0	1	0	16	0	0	0	1
Public Administration	119	13	91	1	6	10	70	1	1	2	0
Social Work	229	17	198	3	1	24	149	6	4	4	1
Theology/Religious Education	168	30	137	0	17	13	98	2	2	2	3
Professional Fields, General	9	1	8	1	0	1	6	0	0	0	0
Professional Fields, Other	63	16	36	0	1	5	28	0	2	0	0
OTHER/UNKNOWN FIELDS	28	2	10	0	1	1	6	0	1	0	1

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table.
Refer also to the explanatory note about this table in front of Appendix A.
*Includes 2,150 individuals who did not report their citizenship at time of doctorate. See the "Important Notice" for discussion of item response rate issues.
‡Includes Pacific Islander.
†Includes Alaskan Native.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

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APPENDIX TABLE A-3a. Statistical profile of doctorate recipients by major field, 1999

Total all doctorates

		1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES#	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Number in Field		41,140	1,431	2,134	824	1,085	850	6,324	5,337	763	4,837	1,410	1,116	8,126
Men	%	57.0	86.0	70.0	73.3	74.2	80.8	76.2	84.4	59.1	56.4	35.4	71.0	55.0
Women		42.5	13.4	29.7	26.2	25.5	18.4	23.3	14.8	40.6	43.2	63.9	28.6	44.6
Unknown*		0.5	0.6	0.3	0.5	0.3	0.8	0.5	0.8	0.3	0.4	0.7	0.4	0.4
U.S. Citizenship	%	67.1	53.2	58.6	58.4	49.6	48.5	54.4	46.4	61.5	65.8	68.5	44.9	63.0
Non-U.S., Permanent Visa		5.6	6.3	7.0	6.3	6.2	8.4	6.8	7.5	7.2	8.5	5.5	5.7	7.4
Non-U.S., Temporary Visa		22.0	35.0	29.2	30.0	40.9	38.8	33.9	41.1	28.0	22.2	20.4	48.0	26.0
Unknown		5.2	5.5	5.2	5.3	3.3	4.4	4.8	5.1	3.3	3.5	5.7	1.3	3.6
Never Married	%	26.2	37.8	36.2	26.6	35.8	30.9	34.5	32.6	29.4	30.3	22.2	22.5	27.8
Married		53.2	44.2	47.8	54.6	49.0	53.3	48.8	53.7	54.9	53.2	55.0	61.9	54.8
Separated, Divorced		5.7	3.2	2.8	3.6	2.7	3.1	3.0	1.9	3.5	4.1	7.0	4.2	4.6
Marriage-like Relationship		5.1	5.2	4.5	6.9	5.3	3.9	5.0	3.0	5.8	5.6	4.5	3.4	5.1
Widowed		0.4	0.1	0.0	0.0	0.1	0.4	0.1	0.1	0.1	0.3	0.9	0.2	0.4
Unknown		9.4	9.4	8.7	8.3	7.1	8.5	8.5	8.7	6.3	6.6	10.4	7.8	7.4
Median Age at Doct	Yrs	33.8	30.2	29.6	33.9	30.6	31.6	30.7	31.4	30.1	31.2	37.3	34.7	32.1
Percent with Bacc. In Same Field as Doctorate	%	51.4	69.2	72.5	16.7	68.1	35.4	62.7	71.2	25.2	50.1	40.6	58.1	47.0
Percent with Masters	%	72.9	62.8	38.1	70.6	71.9	81.4	59.6	80.6	31.6	42.4	78.4	85.0	53.5
Median Time Lapse from Bacc. To Doct														
Total Time	Yrs	10.4	7.7	6.8	10.5	8.0	10.0	8.0	8.7	7.5	8.3	14.0	11.0	9.0
Registered Time		7.3	7.0	6.0	7.6	6.9	7.6	6.8	6.6	6.6	6.9	7.8	6.9	7.6
Postdoctoral Study Plans	%	25.9	50.8	47.6	44.3	31.6	10.2	40.1	21.1	75.6	68.4	21.1	33.5	56.1
Fellowship		13.2	20.7	22.8	18.8	15.2	3.5	17.9	6.6	43.4	39.8	10.8	11.4	31.2
Research Assoc		9.3	28.3	22.4	23.1	13.5	5.6	20.1	12.7	24.4	18.5	6.1	19.6	17.1
Traineeship		0.8	0.3	0.6	0.5	0.4	0.6	0.5	0.8	0.9	1.4	1.3	0.7	1.2
Other Study		2.7	1.5	1.7	1.9	2.5	0.5	1.7	1.0	6.9	8.7	3.0	1.8	6.6
Planned Employment After Doctorate	%	63.2	38.4	42.7	45.8	59.4	80.6	50.1	69.2	16.3	24.0	67.7	57.6	35.5
Educ. Institution**		34.7	7.9	7.8	14.8	33.0	28.7	15.9	11.7	3.9	9.9	37.2	23.5	15.9
Industry/Business		17.5	24.7	30.7	17.8	19.8	44.4	27.6	48.6	10.6	8.4	12.8	16.8	10.5
Government		4.6	3.5	2.1	10.3	2.3	4.8	3.9	6.1	0.8	2.9	6.9	11.9	4.6
Nonprofit		3.2	0.5	0.8	1.0	0.9	1.2	0.8	1.0	0.4	1.4	6.7	2.2	2.3
Other & Unknown		3.1	1.8	1.3	1.8	3.3	1.5	1.9	1.9	0.5	1.5	4.2	3.3	2.1
Postdoc. Plans Unknown	%	10.9	10.8	9.7	10.0	9.0	9.2	9.8	9.7	8.1	7.6	11.1	8.9	8.4
Definite Postdoc. Study	%	18.9	40.3	37.3	29.9	23.9	7.3	30.7	13.8	59.5	52.7	15.1	21.2	42.5
Seeking Postdoc. Study		7.1	10.6	10.2	14.4	7.7	2.9	9.4	7.4	16.1	15.7	6.0	12.3	13.6
Definite Employment		43.7	25.5	29.2	33.1	42.6	59.6	35.3	47.3	10.5	15.3	48.7	40.7	24.1
Seeking Employment		19.5	12.9	13.5	12.6	16.8	20.9	14.8	21.8	5.8	8.7	19.1	16.9	11.3
Employment Commitments After Doctorate		17,982	365	623	273	462	507	2,230	2,527	80	741	686	454	1,961
Primary Activity+														
R & D	%	31.3	58.4	70.0	49.8	38.1	60.9	57.0	70.4	57.5	43.6	36.4	56.6	44.7
Teaching		37.9	14.2	17.3	19.8	47.6	25.6	25.3	10.6	21.3	26.3	37.0	22.7	29.0
Administration		12.3	2.5	2.2	3.3	0.9	3.4	2.4	2.3	2.5	4.3	9.6	4.0	6.0
Prof. Services		13.0	14.0	5.3	16.1	6.9	5.9	8.5	10.5	12.5	18.1	12.4	9.7	13.9
Other		3.2	8.5	3.7	5.9	2.2	2.8	4.2	4.3	2.5	3.8	2.3	4.8	3.5
Secondary Activity														
R & D	%	32.8	22.7	17.8	30.8	46.1	27.6	28.3	17.5	20.0	29.8	35.6	25.6	30.4
Teaching		18.6	6.6	5.8	14.7	14.9	20.3	12.2	13.9	16.3	15.4	19.8	25.8	19.4
Administration		14.4	15.3	26.2	13.6	9.5	14.0	16.6	20.0	16.3	17.9	15.7	15.6	16.6
Prof. Services		11.9	12.3	13.3	14.3	10.0	10.8	12.0	15.8	8.8	11.6	14.7	14.8	13.3
Other		2.2	2.2	2.4	2.2	1.1	1.8	1.9	3.4	2.5	1.6	0.9	2.0	1.5
No Secondary Activity		17.7	38.4	33.1	19.4	14.1	24.1	26.3	27.4	32.5	19.7	11.4	14.3	16.1
Activity(ies) Unknown	%	2.4	2.5	1.4	5.1	4.3	1.4	2.6	1.9	3.8	3.9	1.9	2.0	2.8
Region of Employment After Doctorate+														
New England	%	6.4	9.1	12.0	4.8	5.4	5.2	7.7	6.6	11.3	8.1	8.2	3.1	7.1
Middle Atlantic		14.2	15.4	19.4	5.1	17.6	20.0	16.8	15.0	15.0	11.0	11.7	4.2	9.8
East No. Central		13.9	9.1	16.0	8.4	15.4	9.9	12.4	13.0	12.5	11.8	11.7	8.2	11.0
West No. Central		6.7	4.1	4.8	4.0	7.0	3.4	4.7	4.1	5.0	7.2	6.3	13.1	8.1
South Atlantic		16.8	13.2	15.5	10.6	13.7	15.1	14.1	12.4	17.5	16.8	22.5	13.6	18.1
East So. Central		4.7	2.5	3.1	4.4	3.0	2.8	3.1	2.9	1.3	3.5	5.0	4.9	4.3
West So. Central		8.8	7.4	6.6	20.9	9.3	6.7	9.1	9.3	7.5	7.6	7.3	6.2	7.2
Mountain		5.2	9.6	2.4	7.0	5.7	4.8	5.4	5.5	5.0	3.9	5.0	5.6	4.7
Pacific & Insular		13.6	21.5	15.7	17.9	12.8	22.6	17.9	20.5	16.3	17.8	12.3	8.7	13.7
U.S., Region Unknown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign		9.4	7.4	4.2	16.5	9.8	9.5	8.6	10.5	6.3	12.1	10.0	32.2	15.7
Region Unknown		0.3	0.6	0.3	0.4	0.2	0.0	0.3	0.3	2.5	0.3	0.0	0.2	0.3

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.
#Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences.

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APPENDIX TABLE A-3a. Statistical profile of doctorate recipients, by major field: 1999

Total all doctorates

Psychology	Economics	Anthropology and Sociology	Political Sci./ International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. And Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields/ Unknown##	PROFESSIONAL /OTHER FIELDS	TOTAL NONSCIENCES
3,667	927	1,004	773	665	7,036	26,82	1,011	1,024	628	2,805	5,468	6,557	1,104	1,160	28	2,292	14,31
33.0	72.4	41.6	66.8	57.0	45.4	63.3	60.4	40.8	38.7	53.7	50.8	35.7	68.5	49.7	53.6	58.8	78.5
66.7	27.2	58.3	32.7	42.4	54.3	36.2	39.6	59.0	61.1	45.3	48.6	64.0	31.0	50.1	42.9	40.8	4.3
0.3	0.4	0.1	0.5	0.6	0.3	0.5	0.0	0.2	0.2	1.1	0.6	0.3	0.5	0.2	3.6	0.4	11.5
																	5.8
86.2	43.1	76.3	74.1	68.0	76.1	61.1	84.1	86.3	64.6	75.8	78.0	82.8	63.0	71.8	25.0	67.0	78.4
1.9	7.2	5.2	5.0	4.7	3.7	6.3	4.5	3.4	12.7	5.3	5.7	2.7	5.9	4.5	10.7	5.2	4.3
4.2	45.0	12.7	15.9	22.1	13.8	27.7	7.8	6.6	18.6	13.4	11.7	7.9	26.2	17.3	7.1	21.5	11.0
7.7	4.6	5.8	4.9	5.3	6.5	4.9	3.7	3.6	4.0	5.5	4.6	6.5	4.9	6.4	57.1	6.3	6.3
26.2	33.3	23.0	25.4	21.8	26.2	29.9	24.7	25.4	27.7	25.6	25.6	13.8	19.3	20.9	17.9	20.1	19.3
46.4	51.1	50.6	51.2	56.4	49.1	51.7	53.7	48.7	48.2	49.4	49.9	60.8	61.0	53.5	10.7	56.6	56.0
7.3	2.7	9.2	5.2	7.2	6.7	4.2	6.4	6.9	7.3	7.0	6.9	10.1	5.5	7.5	0.0	6.5	8.3
6.5	4.5	8.6	6.5	5.6	6.5	5.0	6.6	10.2	8.8	7.7	8.1	3.2	2.9	5.6	0.0	4.2	5.3
0.2	0.2	0.2	0.6	0.3	0.3	0.2	0.7	0.6	0.2	0.3	0.4	1.1	0.8	0.3	0.0	0.6	0.8
13.3	8.1	8.5	11.1	8.7	11.3	8.9	7.8	8.2	7.8	9.9	9.0	10.9	10.5	12.2	71.4	12.1	10.3
32.3	31.7	35.3	33.9	43.6	33.2	31.8	34.8	34.3	34.9	35.7	35.1	44.3	36.1	39.1	33.2	37.5	39.2
58.4	55.8	73.4	51.7	19.8	55.8	57.8	55.9	61.9	0.0	51.2	48.2	34.8	34.1	29.4	0.0	31.3	39.4
74.6	72.8	82.5	77.9	86.3	77.0	66.5	84.6	85.5	85.7	81.2	83.1	87.4	80.3	87.0	17.9	82.9	85.1
9.0	8.9	11.6	10.9	12.2	9.9	8.9	11.3	11.0	11.3	12.0	11.7	19.9	12.9	15.0	9.3	14.0	14.9
7.2	7.0	8.8	8.3	8.0	7.5	7.0	9.0	8.5	8.6	9.0	8.9	8.2	7.8	8.4	6.0	8.0	8.5
30.1	7.2	17.1	10.7	12.2	21.4	36.3	10.4	7.2	8.6	7.7	8.2	5.8	3.4	6.5	10.7	5.1	6.6
22.2	3.8	9.9	6.3	4.4	14.6	18.8	6.4	4.4	3.2	3.7	4.3	1.6	0.9	2.8	7.1	2.0	2.7
4.1	2.2	5.1	2.7	5.4	4.0	13.5	1.5	0.6	1.6	1.2	1.2	1.7	1.1	1.5	0.0	1.3	1.4
1.6	0.5	0.1	0.5	0.3	1.0	0.9	0.2	0.4	1.6	0.6	0.6	0.5	0.5	0.3	0.0	0.4	0.5
2.1	0.8	2.1	1.2	2.1	1.8	3.1	2.3	1.9	2.2	2.2	2.1	1.9	1.0	1.8	3.6	1.4	1.9
54.9	84.1	72.3	76.3	77.1	65.7	53.6	78.6	83.7	80.6	80.2	80.6	81.5	85.1	79.6	17.9	81.5	81.2
22.4	43.0	49.1	50.6	43.5	34.0	19.8	57.7	68.6	70.1	60.5	62.6	64.5	65.7	49.7	14.3	57.0	62.6
14.6	20.5	7.8	6.9	13.1	13.4	22.9	6.9	8.1	4.5	8.1	7.5	6.0	13.9	10.6	0.0	12.0	7.5
5.9	11.9	4.8	8.7	9.2	7.1	5.4	3.6	0.7	0.6	1.2	1.5	4.1	2.2	5.0	0.0	3.6	3.0
8.0	3.2	5.1	4.9	6.6	6.5	2.8	3.3	1.3	1.0	6.0	4.0	3.5	1.4	10.0	0.0	5.7	4.1
4.0	5.5	5.6	5.3	4.8	4.6	2.7	7.2	5.1	4.5	4.3	5.0	3.4	2.1	4.2	3.6	3.2	4.0
15.0	8.6	10.6	12.9	10.7	12.9	10.2	11.0	9.1	10.8	12.1	11.2	12.7	11.4	14.0	71.4	13.4	12.2
22.4	5.2	11.4	7.4	7.7	15.5	26.9	6.4	4.1	4.0	4.5	4.7	3.3	1.8	4.1	7.1	3.1	3.8
7.7	2.0	5.8	3.4	4.5	5.9	9.4	4.0	3.1	4.6	3.2	3.5	2.5	1.6	2.3	3.6	2.0	2.8
35.8	64.0	44.0	50.6	53.7	44.0	36.6	44.9	52.7	54.3	49.3	49.7	61.2	69.7	57.2	10.7	62.6	57.0
19.1	20.2	28.3	25.7	23.5	21.7	17.0	33.7	31.0	26.3	30.9	30.9	20.3	15.5	22.4	7.1	18.9	24.1
1,314	593	442	391	357	3,097	9,815	454	540	341	1,382	2,717	4,015	769	663	3	1,435	8,167
17.7	51.3	33.0	30.2	29.4	29.3	49.2	9.0	5.4	5.9	7.7	7.2	6.6	31.9	13.0	33.3	23.1	9.7
20.9	25.3	50.7	49.6	42.6	32.1	24.4	72.2	80.4	83.6	72.4	75.3	40.2	51.0	53.7	66.7	52.3	54.0
6.2	3.7	5.7	9.0	10.9	6.5	4.4	7.0	5.2	3.5	5.3	5.3	37.9	5.6	10.9	0.0	8.0	21.8
50.9	12.8	6.6	5.6	12.9	27.2	16.0	6.2	3.1	3.8	8.0	6.2	10.7	7.4	16.0	0.0	11.4	9.3
2.6	5.4	2.3	3.3	2.8	3.2	3.8	2.0	3.1	0.6	4.3	3.2	1.7	2.5	3.6	0.0	3.0	2.5
28.4	32.9	47.1	45.0	43.7	35.8	28.3	57.7	55.2	65.4	44.5	51.5	26.4	47.3	45.4	33.3	46.4	38.2
20.2	27.5	21.5	22.0	20.4	22.0	17.2	10.6	9.8	7.9	14.1	11.9	23.1	34.2	20.4	33.3	27.8	20.2
17.4	14.0	12.0	9.7	10.6	14.2	16.7	10.1	11.7	7.9	13.5	11.9	12.5	5.5	12.5	33.3	8.8	11.6
10.1	7.4	7.2	7.2	10.9	8.9	12.3	3.7	4.8	6.2	8.8	6.8	16.3	6.0	8.4	0.0	7.1	11.5
1.4	2.7	1.4	1.0	1.4	1.6	2.1	2.6	3.3	1.2	5.8	4.2	1.5	0.3	2.0	0.0	1.0	2.3
20.8	14.0	9.0	12.8	11.5	15.7	21.2	11.9	12.6	9.1	11.1	11.3	17.4	5.1	8.4	0.0	6.6	13.5
1.8	1.5	1.6	2.3	1.4	1.7	2.2	3.3	2.6	2.3	2.2	2.5	2.8	1.7	2.9	0.0	2.2	2.6
5.5	8.6	7.0	7.9	9.6	7.1	7.1	7.9	7.8	12.6	7.0	8.0	4.1	6.3	4.4	0.0	5.4	5.6
19.9	12.2	13.8	13.0	12.7	15.8	14.6	16.1	16.9	13.8	13.2	14.5	13.2	14.3	12.9	0.0	13.6	13.7
13.7	8.1	17.0	14.1	14.1	13.2	12.5	13.7	17.3	15.6	16.4	16.0	15.8	15.0	13.5	33.3	14.3	15.6
8.6	2.9	5.7	3.3	6.2	6.1	5.7	6.2	8.4	9.7	7.9	7.9	8.7	4.7	6.5	0.0	5.5	7.9
15.9	26.6	15.4	25.1	20.0	19.5	16.1	15.5	15.6	10.0	14.2	14.2	19.5	17.8	18.9	0.0	18.3	17.5
5.1	2.0	3.4	1.8	4.5	3.8	3.5	5.3	8.2	7.1	4.5	5.7	6.5	6.8	6.1	0.0	6.4	6.2
9.3	5.4	5.0	7.2	5.4	7.2	8.2	8.8	7.6	6.8	9.4	8.6	9.9	11.3	8.6	0.0	10.1	9.5
6.1	3.2	5.9	5.6	4.2	5.2	5.2	5.1	2.6	3.2	5.4	4.5	6.2	3.6	4.8	0.0	4.2	5.3
13.8	8.0	16.8	9.7	9.0	12.0	15.9	12.6	10.6	12.4	11.5	11.6	10.7	7.7	11.4	0.0	9.4	10.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.1	22.8	10.0	12.3	14.4	9.9	10.9	8.6	4.8	8.2	10.2	8.6	5.2	12.0	12.6	66.7	12.4	7.6
0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.6	0.2	0.2	0.3	0.5	0.3	0.0	0.4	0.3

*Includes 187 respondents not reporting gender. **Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
##Includes 28 respondents whose doctoral field was unknown. +Includes only recipients with definite employment plans.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-3b. Statistical profile of doctorate recipients, by major field, 1999

Total men

		1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES#	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Total Men		23,460	1,231	1,494	604	805	687	4,821	4,603	451	2,730	499	793	4,473
Men as a Percent of Total Doctorates	%	57.0	86.0	70.0	73.3	74.2	80.8	76.2	84.4	59.1	56.4	35.4	71.0	55.0
U.S. Citizenship	%	61.3	53.5	59.5	56.3	46.3	46.9	53.6	45.5	61.2	63.4	56.3	43.1	58.8
Non-U.S., Permanent Visa		5.9	5.8	5.7	6.0	5.0	8.3	6.0	7.4	5.3	8.2	8.8	5.2	7.4
Non-U.S., Temporary Visa		28.3	35.3	29.7	33.1	45.5	41.0	35.8	42.9	30.6	24.9	27.9	50.8	30.4
Unknown		4.5	5.4	5.1	4.6	3.2	3.8	4.6	4.2	2.9	3.4	7.0	0.9	3.3
Never Married	%	27.1	39.5	35.1	25.3	36.9	32.6	35.0	32.8	30.6	27.6	19.6	19.0	25.5
Married		56.2	43.5	49.9	57.3	48.8	53.6	49.6	54.9	55.2	56.7	59.9	67.3	58.8
Separated, Divorced		3.6	2.8	2.2	3.8	2.5	2.3	2.6	1.9	3.1	4.1	4.8	3.4	4.0
Marriage-like Relationship		4.3	5.0	3.9	5.8	4.6	3.8	4.5	2.6	4.9	4.9	3.2	3.0	4.4
Widowed		0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.4	0.3	0.2
Unknown		8.6	9.1	8.8	7.8	7.1	7.6	8.3	7.8	6.0	6.5	12.0	6.9	7.1
Median Age at Doct.	Yrs	33.2	30.2	29.6	34.1	30.8	31.8	30.8	31.6	30.4	31.6	34.6	35.0	32.3
Percent with Bacc. in Same Field as Doctorate	%	53.6	69.4	72.9	47.2	66.3	37.0	62.6	72.7	26.6	49.0	26.9	52.2	44.9
Percent with Masters	%	72.1	62.4	37.3	73.3	71.3	81.1	60.1	81.8	33.0	44.1	71.7	87.1	53.7
Median Time Lapse from Bacc. To Doct.														
Total Time	Yrs	10.0	7.7	6.7	11.0	8.0	9.7	8.0	8.9	7.7	8.4	11.3	11.4	9.0
Registered Time		7.3	7.0	6.0	7.6	7.0	7.3	6.8	6.7	6.8	7.0	7.4	6.9	7.0
Postdoctoral Study Plans	%	27.9	50.6	49.9	44.7	33.7	9.6	41.0	21.1	79.6	69.3	24.2	33.9	59.1
Fellowship		13.3	21.0	24.3	18.0	15.4	2.9	18.1	6.4	45.9	39.1	11.2	10.5	31.6
Research Assoc.		11.1	27.9	23.2	24.2	14.9	5.5	20.6	12.7	24.8	18.5	7.4	20.7	18.3
Traineeship		0.8	0.2	0.5	0.2	0.5	0.7	0.4	0.9	0.9	1.6	2.0	0.8	1.4
Other Study		2.7	1.5	1.9	2.3	2.9	0.4	1.8	1.1	8.0	10.1	3.6	2.0	7.7
Planned Employment After Doctorate	%	62.4	38.9	40.9	46.5	57.3	82.2	49.7	70.4	14.2	23.6	62.3	58.6	33.2
Educ. Institution*		30.2	7.6	6.8	13.9	30.2	28.4	14.9	11.4	2.9	10.3	32.5	24.1	14.5
Industry/Business		21.9	25.7	30.6	19.0	21.2	46.6	28.6	49.8	9.8	8.4	18.2	17.2	11.2
Government		5.1	3.3	1.5	10.8	2.2	4.7	3.7	6.4	0.4	2.9	6.0	12.2	4.6
Nonprofit		2.7	0.5	0.9	1.3	0.7	1.0	0.9	1.1	0.7	1.2	3.4	1.9	1.5
Other & Unknown		2.4	1.8	1.1	1.5	2.9	1.6	1.7	1.7	0.4	0.8	2.2	3.3	1.4
Postdoc. Plans Unknown	%	9.7	10.5	9.2	8.8	9.1	8.2	9.3	8.6	6.2	7.0	13.4	7.4	7.7
Definite Postdoc. Study	%	20.5	40.6	39.7	30.3	25.3	6.6	31.6	13.4	63.0	54.2	19.6	20.9	45.4
Seeking Postdoc. Study		7.4	10.0	10.2	14.4	8.3	3.1	9.3	7.7	16.6	15.1	4.6	13.0	13.7
Definite Employment		43.6	26.0	27.7	34.3	41.9	60.1	35.1	48.3	9.5	16.2	46.5	42.6	23.6
Seeking Employment		18.8	12.9	13.2	12.3	15.4	22.1	14.6	22.0	4.7	7.4	15.8	16.0	9.6
Employment Commitments After Doctorate		10,232	320	414	207	337	413	1,691	2,176	43	442	232	338	1,055
Primary Activity+														
R & D	%	39.5	59.1	72.7	52.2	40.1	63.9	59.0	71.2	62.8	47.5	47.0	56.8	51.0
Teaching		32.7	13.1	14.5	16.4	44.8	23.5	22.7	10.0	16.3	24.0	31.0	21.9	24.5
Administration		10.1	2.8	2.7	2.9	0.6	2.9	2.4	2.4	2.3	4.5	5.6	3.8	4.5
Prof. Services		11.6	14.1	5.3	16.4	7.4	5.6	8.8	10.1	9.3	17.0	12.1	10.9	13.6
Other		3.8	8.1	3.6	5.3	2.7	2.7	4.3	4.4	2.3	3.2	2.6	4.4	3.4
Secondary Activity														
R & D	%	30.6	21.9	15.9	26.1	43.6	25.4	26.1	17.1	18.6	28.7	31.5	24.9	27.7
Teaching		18.9	6.6	5.8	16.4	15.1	20.6	12.7	13.9	11.6	15.6	22.0	26.9	20.5
Administration		15.7	15.3	27.8	14.5	10.7	14.8	17.2	20.5	16.3	17.6	20.3	15.7	17.5
Prof. Services		12.1	12.5	15.7	15.0	11.0	11.1	13.0	15.9	11.6	12.4	12.9	15.7	13.6
Other		2.3	1.9	2.7	1.9	0.9	1.9	1.9	3.6	4.7	1.8	0.0	1.5	1.4
No Secondary Activity		18.0	39.1	30.9	19.3	14.2	24.7	26.2	27.0	30.2	19.9	12.1	13.6	16.6
Activity(ies) Unknown	%	2.4	2.8	1.2	6.8	4.5	1.5	2.9	1.9	7.0	3.8	1.3	1.8	2.7
Region of Employment After Doctorate+														
New England	%	6.5	9.7	12.1	2.4	5.7	5.6	7.6	6.7	14.0	8.4	9.1	3.3	7.1
Middle Atlantic		14.1	16.4	20.1	4.3	18.2	20.5	17.2	14.5	18.6	9.8	13.4	3.9	9.1
East No. Central		13.4	10.1	16.7	5.8	14.6	9.8	12.0	13.0	9.3	13.2	12.5	7.5	11.1
West No. Central		6.2	4.4	5.6	5.3	6.8	3.2	5.0	3.7	9.3	7.7	6.5	11.6	8.8
South Atlantic		15.4	13.2	15.8	9.7	13.1	13.7	13.5	12.0	16.3	16.6	21.1	12.2	16.2
East So. Central		4.4	2.2	3.4	5.3	3.3	2.9	3.3	3.1	0.0	3.6	6.5	5.7	4.8
West So. Central		8.9	6.3	4.9	23.7	8.9	7.1	8.8	9.2	9.3	8.0	5.6	6.9	7.1
Mountain		5.1	10.1	2.2	5.8	6.0	4.4	5.4	5.4	2.3	3.2	3.4	6.0	4.1
Pacific & Insular		14.1	20.4	14.6	19.8	12.2	23.9	18.1	21.3	11.6	16.2	9.5	7.8	11.8
U.S., Region Unknown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign		11.5	6.6	4.1	17.4	11.0	9.0	8.8	10.8	7.0	13.0	12.5	35.2	19.7
Region Unknown		0.3	0.6	0.5	0.5	0.3	0.0	0.4	0.3	2.3	0.2	0.0	0.0	0.2

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.
#Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences.

APPENDIX TABLE A-3b Statistical profile of doctorate recipients, by major field, 1999

Total men

Psychology	Economics	Anthropology and Sociology	Political Sci./ International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. And Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields/ Unknown	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
1,210	**1,030**	**418**	**516**	**379**	**3,194**	**16,99**	**611**	**418**	**243**	**1,505**	**2,777**	**2,344**	**756**	**577**	**15**	**1,348**	**6,469**
33.0	56.7	41.6	66.8	57.0	45.4	63.3	60.4	40.8	38.7	53.7	50.8	35.7	68.5	49.7	53.6	58.8	45.2
85.3	53.9	73.4	73.3	62.8	70.1	55.9	84.1	81.8	66.7	76.8	78.3	80.5	57.7	66.4	26.7	61.1	75.5
1.7	5.3	4.5	4.7	4.7	3.8	6.4	5.2	4.1	7.8	5.6	5.5	2.9	6.1	4.7	6.7	5.5	4.6
5.8	36.7	17.0	17.2	27.7	20.4	33.4	7.7	9.6	21.8	13.8	12.5	10.5	32.1	22.2	6.7	27.6	14.9
7.2	4.1	5.0	4.8	4.7	5.7	4.3	2.9	4.5	3.7	3.9	3.7	6.1	4.1	6.8	60.0	5.9	5.1
26.4	27.2	20.8	23.4	21.4	25.9	30.2	24.5	22.7	30.9	24.8	25.0	12.1	19.6	17.9	26.7	18.9	19.0
48.8	57.0	58.6	55.4	62.0	53.4	54.1	56.1	55.7	47.3	55.5	55.0	69.6	64.9	59.3	6.7	61.9	61.7
5.2	3.6	7.2	4.5	4.0	4.7	3.2	5.2	2.6	3.7	5.0	4.6	5.1	4.2	5.2	0.0	4.6	4.8
6.4	4.2	6.0	5.4	3.2	5.4	4.1	5.7	9.1	10.3	6.4	7.0	2.8	2.2	4.3	0.0	3.1	4.7
0.1	0.3	0.2	0.2	0.3	0.2	0.1	0.5	0.5	0.0	0.3	0.3	0.3	0.5	0.2	0.0	0.4	0.3
13.1	7.8	7.2	11.0	9.2	10.5	8.3	7.9	9.3	7.8	7.9	8.1	10.2	8.5	13.2	66.7	11.1	9.5
32.8	31.8	35.2	34.3	42.1	33.7	31.8	35.0	34.4	35.0	35.9	35.3	43.2	35.9	38.8	30.3	37.2	38.0
58.1	48.2	73.9	51.9	21.9	54.1	59.0	58.9	62.2	0.0	53.9	51.5	29.9	34.3	28.9	0.0	31.6	39.5
73.8	78.3	84.9	77.3	85.2	77.0	67.3	86.3	84.7	84.4	81.6	83.3	87.5	81.6	85.8	13.3	82.6	84.7
9.0	9.0	11.3	10.9	11.9	10.0	8.8	11.3	10.9	11.3	12.0	11.8	18.3	12.9	15.0	9.1	13.6	13.9
7.3	6.9	8.7	8.3	8.0	7.6	7.0	9.0	8.3	8.5	8.9	8.9	8.1	7.8	8.5	9.0	8.0	8.4
28.5	6.6	16.0	10.5	11.1	17.3	36.0	9.5	7.9	9.5	7.7	8.3	5.8	3.3	6.9	20.0	5.0	6.7
20.2	3.3	10.3	5.8	3.7	11.1	17.2	5.6	4.8	3.7	3.5	4.1	1.7	1.1	3.1	13.3	2.1	2.8
5.1	1.9	4.1	2.5	5.3	3.9	14.8	1.3	0.5	2.5	1.3	1.3	2.2	0.9	1.2	0.0	1.0	1.6
1.3	0.7	0.0	0.6	0.5	0.8	0.9	0.2	0.5	2.1	0.7	0.6	0.4	0.4	0.3	0.0	0.4	0.5
1.9	0.7	1.7	1.6	1.6	1.5	3.1	2.5	2.2	1.2	2.3	2.2	1.5	0.9	2.3	6.7	1.6	1.8
57.5	84.4	74.6	77.1	78.4	71.1	54.9	80.2	82.1	80.7	82.1	81.6	82.7	86.5	78.7	13.3	82.3	82.1
24.4	51.7	50.0	51.0	42.7	38.3	18.3	57.3	68.2	68.3	62.1	62.5	64.0	66.1	44.7	13.3	56.4	61.7
17.1	16.7	7.2	7.4	16.4	15.0	27.1	8.3	8.4	5.8	7.6	7.7	6.9	14.9	10.4	0.0	12.8	8.5
7.4	9.4	7.9	8.9	10.8	9.1	5.7	3.9	0.7	1.2	1.3	1.8	5.4	2.5	5.9	0.0	3.9	3.5
6.4	2.9	4.1	4.7	3.4	4.7	1.8	3.4	1.4	1.2	7.3	5.0	3.7	1.2	13.9	0.0	6.6	4.9
2.3	3.6	5.5	5.2	5.0	4.0	2.0	7.2	3.3	4.1	3.9	4.5	2.8	1.7	3.8	0.0	2.6	3.5
14.0	9.0	9.3	12.4	10.6	11.6	9.1	10.3	10.0	9.9	10.2	10.2	11.4	10.2	14.4	66.7	12.6	11.1
22.1	4.6	10.5	7.4	7.7	12.8	26.9	5.7	5.3	3.7	4.5	4.8	3.3	1.9	4.3	13.3	3.0	3.9
6.4	2.0	5.5	3.1	3.4	4.4	9.1	3.8	2.6	5.8	3.2	3.5	2.6	1.5	2.6	6.7	2.0	2.8
39.9	63.7	45.0	51.0	54.6	49.4	38.3	43.7	52.6	51.0	50.3	49.3	63.8	71.0	57.0	13.3	64.4	57.7
17.6	20.7	29.7	26.2	23.7	21.7	16.6	36.5	29.4	29.6	31.8	32.3	18.9	15.5	21.7	0.0	18.0	24.5
483	**656**	**188**	**263**	**207**	**1,579**	**6,501**	**267**	**220**	**124**	**757**	**1,368**	**1,495**	**537**	**329**	**2**	**868**	**3,731**
20.9	37.7	36.2	29.3	27.1	33.5	55.6	10.9	5.0	4.8	6.9	7.2	7.6	33.3	10.6	50.0	24.8	11.4
20.7	38.1	46.3	47.5	43.0	32.0	21.0	68.5	80.9	82.3	72.3	73.8	35.6	49.5	50.8	50.0	50.0	53.0
7.5	7.6	5.3	9.9	12.1	7.3	3.9	6.7	5.0	3.2	5.2	5.3	42.8	4.8	11.9	0.0	7.5	20.8
46.6	9.9	8.5	6.5	11.6	21.2	13.0	6.7	2.7	8.1	8.7	7.3	9.2	7.8	17.6	0.0	11.5	9.0
3.1	5.0	2.1	4.2	4.3	4.3	4.2	2.6	3.2	0.8	4.2	3.4	2.2	3.0	5.8	0.0	4.0	3.1
28.8	35.7	42.6	43.7	48.8	36.5	25.9	50.2	56.4	74.2	44.8	50.4	25.4	46.2	41.3	0.0	44.2	38.9
20.1	23.9	25.0	24.0	18.8	23.7	17.0	12.0	10.9	9.7	13.6	12.5	26.4	35.6	21.9	50.0	30.4	22.2
18.4	14.5	14.9	9.1	9.2	14.4	17.7	13.9	10.9	5.6	14.7	13.1	13.1	6.5	14.0	50.0	9.4	12.2
12.2	10.1	7.4	6.5	10.6	9.2	13.1	3.7	4.1	4.0	8.6	6.5	15.6	5.4	9.4	0.0	6.9	10.2
0.6	2.4	1.1	0.8	1.0	1.3	2.2	1.9	4.1	1.6	5.5	4.2	1.5	0.2	2.1	0.0	0.9	2.4
18.6	11.7	7.4	13.3	9.7	13.2	21.8	14.2	10.9	4.0	10.2	10.5	15.5	4.7	7.9	0.0	5.9	11.4
1.2	1.7	1.6	2.7	1.9	1.7	2.2	4.1	2.7	0.8	2.6	2.8	2.5	1.5	3.3	0.0	2.2	2.5
5.2	5.8	7.0	8.0	8.3	6.8	7.0	8.3	7.3	8.1	7.3	7.5	3.5	6.5	4.0	0.0	5.6	5.5
19.8	14.5	16.0	14.8	12.6	15.8	14.6	14.7	17.3	13.0	12.3	13.6	13.2	14.6	11.0	0.0	13.2	13.3
13.1	10.2	14.4	12.2	13.6	11.8	12.1	14.3	20.0	17.9	17.1	17.1	16.5	14.4	8.9	50.0	12.4	15.8
10.2	4.1	5.3	3.4	5.3	5.9	5.4	5.6	9.5	9.8	7.3	7.5	8.9	4.7	7.1	0.0	5.6	7.6
15.0	21.7	15.0	25.9	19.4	20.2	15.0	18.0	13.6	8.1	13.1	13.7	17.7	16.8	18.1	0.0	17.2	16.1
5.2	3.4	3.7	1.5	4.9	3.6	3.5	4.5	9.1	8.1	5.0	5.9	5.4	6.9	7.4	0.0	7.1	6.0
9.6	7.5	3.7	7.2	8.7	7.4	8.3	9.4	5.5	5.7	10.2	8.9	10.0	11.0	10.4	0.0	10.8	9.8
5.8	3.8	4.8	4.6	3.4	4.5	4.9	4.1	2.7	7.3	5.6	5.0	6.7	3.5	4.9	0.0	4.1	5.5
13.5	7.6	13.9	7.6	7.8	10.2	16.3	11.7	8.2	14.6	11.6	11.4	10.3	8.0	10.1	0.0	8.8	10.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5	20.9	16.0	14.8	16.0	13.9	12.5	9.4	6.8	6.5	10.3	9.2	7.5	13.4	17.5	50.0	15.0	9.9
0.0	0.3	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.8	0.3	0.2	0.3	0.2	0.6	0.0	0.3	0.3

*Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools. +Includes only recipients with definite employment plans.
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field, 1999

Total women

		1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES#	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES
Total Women		17,493	192	633	216	277	156	1,474	791	310	2,090	901	319	3,620
Women as a Percent of Total Doctorates	%	42.5	13.4	29.7	26.2	25.5	18.4	23.3	14.8	40.6	43.2	63.9	28.6	44.6
U.S. Citizenship	%	75.7	53.1	57.2	65.3	59.6	57.7	58.3	53.9	62.3	69.5	76.0	49.8	68.8
Non-U.S., Permanent Visa		5.3	9.4	10.1	7.4	9.7	9.0	9.4	8.1	10.0	8.9	3.7	7.2	7.5
Non-U.S., Temporary Visa		13.9	34.9	28.4	21.8	27.8	30.8	28.4	32.7	24.5	18.7	16.4	41.7	20.7
Unknown		5.2	2.6	4.3	5.6	2.9	2.6	3.8	5.3	3.2	2.9	3.9	1.3	3.0
Never Married	%	25.3	28.6	39.0	30.6	32.5	25.0	33.7	33.1	27.7	34.2	23.9	31.3	30.8
Married		49.7	50.5	43.3	48.1	50.2	54.5	47.4	49.6	54.8	48.9	52.9	49.2	50.5
Separated, Divorced		8.5	6.3	4.1	3.2	3.2	6.4	4.3	2.3	4.2	4.2	8.3	6.3	5.4
Marriage-like Relationship		6.3	6.8	6.0	10.2	7.6	4.5	6.9	5.9	7.1	6.5	5.2	4.4	6.0
Widowed		0.7	0.0	0.2	0.0	0.0	1.3	0.2	0.1	0.0	0.3	1.2	0.0	0.5
Unknown		9.5	7.8	7.4	7.9	6.5	8.3	7.5	9.0	6.1	5.9	8.4	8.8	6.8
Median Age at Doct.	Yrs	34.7	30.2	29.4	33.2	29.8	34.7	30.4	30.5	29.8	30.8	39.9	33.3	31.9
Percent with Bacc. in Same Field as Doctorate	%	49.0	70.8	72.4	46.3	73.6	30.1	64.1	66.5	23.2	56.5	48.6	39.2	50.1
Percent with Masters	%	74.6	67.7	40.6	64.4	74.0	86.5	58.8	77.7	29.7	40.4	82.7	79.9	53.5
Median Time Lapse from Bacc. To														
Total Time	Yrs	11.3	7.8	6.9	10.0	7.5	12.5	7.9	8.0	7.0	8.1	15.3	10.4	9.0
Registered Time		7.6	7.0	6.0	7.6	6.6	8.0	6.6	6.3	6.3	6.8	8.0	6.9	7.0
Postdoctoral Study Plans	%	23.5	54.2	42.7	44.0	26.0	13.5	38.1	22.5	70.3	67.8	19.6	32.9	52.9
Fellowship		13.3	19.8	19.6	21.3	14.8	6.4	17.6	8.2	40.0	41.1	10.7	13.8	31.0
Research Assoc.		6.9	32.3	20.9	20.4	9.7	6.4	18.7	13.0	23.9	18.6	5.4	17.2	15.7
Traineeship		0.8	1.0	0.8	1.4	0.0	0.0	0.7	0.5	1.0	1.2	0.9	0.6	1.0
Other Study		2.6	1.0	1.4	0.9	1.4	0.6	1.2	0.8	5.5	6.9	2.7	1.3	5.2
Planned Employment														
After Doctorate	%	64.9	37.0	47.4	44.4	66.1	76.9	52.2	66.4	19.4	24.7	71.5	55.8	38.6
Educ. Institution*		41.0	9.9	10.3	17.6	41.5	31.4	19.4	14.0	5.5	9.5	40.2	22.3	17.9
Industry/Business		11.8	19.8	31.3	14.8	15.9	36.5	25.0	44.4	11.9	8.5	10.0	16.0	9.8
Government		3.9	4.7	3.5	9.3	2.5	5.8	4.5	4.4	1.3	2.7	7.4	11.0	4.5
Nonprofit		4.0	0.5	0.6	0.0	1.4	1.9	0.8	0.5	0.0	1.6	8.5	3.1	3.3
Other & Unknown		4.1	2.1	1.7	2.8	4.7	1.3	2.4	3.0	0.6	2.4	5.3	3.4	3.1
Postdoc. Plans Unknown	%	11.6	8.9	10.0	11.6	7.9	9.6	9.6	11.1	10.3	7.6	8.9	11.3	8.5
Definite Postdoc. Study	%	16.8	39.6	32.2	29.2	19.9	10.9	28.2	16.6	54.8	51.2	12.8	22.3	39.4
Seeking Postdoc. Study		6.7	14.6	10.4	14.8	6.1	2.6	10.0	5.9	15.5	16.6	6.9	10.7	13.5
Definite Employment		44.3	23.4	33.0	30.6	45.1	60.3	36.6	44.4	11.9	14.3	50.4	36.4	25.0
Seeking Employment		20.6	13.5	14.4	13.9	20.9	16.7	15.7	22.0	7.4	10.4	21.1	19.4	13.6
Employment Commitments Doctorate		7,750	45	209	66	125	94	539	351	37	299	454	116	906
Primary Activity+														
R & D	%	20.5	53.3	64.6	42.4	32.8	47.9	50.6	65.5	51.4	37.8	31.1	56.0	37.3
Teaching		44.7	22.2	23.0	30.3	55.2	35.1	33.4	14.5	27.0	29.8	40.1	25.0	34.2
Administration		15.2	0.0	1.4	4.5	1.6	5.3	2.4	1.4	2.7	4.0	11.7	4.3	7.8
Prof. Services		14.8	13.3	5.3	15.2	5.6	7.4	7.6	12.8	16.2	19.7	12.6	6.0	14.2
Other		2.4	11.1	3.8	7.6	0.8	3.2	4.1	3.4	2.7	4.7	2.2	6.0	3.5
Secondary Activity														
R & D	%	35.7	28.9	21.5	45.5	52.8	37.2	35.1	19.7	21.6	31.4	37.7	27.6	33.7
Teaching		18.1	6.7	5.7	9.1	14.4	19.1	10.6	14.0	21.6	15.1	18.7	22.4	18.1
Administration		12.7	15.6	23.0	10.6	6.4	10.6	14.8	16.8	16.2	18.4	13.4	15.5	15.5
Prof. Services		11.7	11.1	8.6	12.1	7.2	9.6	9.1	15.1	5.4	10.4	15.6	12.1	13.0
Other		2.1	4.4	1.9	3.0	1.6	1.1	2.0	2.3	0.0	1.3	1.3	3.4	1.5
No Secondary Activity		17.3	33.3	37.3	19.7	13.6	21.3	26.5	29.9	35.1	19.4	11.0	16.4	15.5
Activity(ies) Unknown	%	2.4	0.0	1.9	0.0	4.0	1.1	1.9	2.3	0.0	4.0	2.2	2.6	2.8
Region of Employment After Doctorate+														
New England	%	6.4	4.4	11.6	12.1	4.8	3.2	8.0	6.0	8.1	7.7	7.8	2.6	7.1
Middle Atlantic		14.3	8.9	17.9	7.6	16.1	18.1	15.5	18.4	10.8	12.7	10.9	5.2	10.8
East No. Central		14.6	2.2	14.5	16.7	17.7	10.6	13.8	13.2	16.2	9.7	11.3	10.4	10.9
West No. Central		7.3	2.2	3.4	0.0	7.3	4.3	3.9	6.0	0.0	6.4	6.2	17.4	7.4
South Atlantic		18.5	13.3	15.0	13.6	15.3	21.3	15.9	14.7	18.9	17.1	23.3	17.4	20.3
East So. Central		5.1	4.4	2.4	1.5	2.4	2.1	2.4	1.1	2.7	3.3	4.2	2.6	3.7
West So. Central		8.7	15.6	10.1	12.1	10.5	5.3	10.1	10.1	5.4	7.0	8.2	4.3	7.2
Mountain		5.4	6.7	2.9	10.6	4.8	6.4	5.2	6.3	8.1	5.0	5.8	4.3	5.4
Pacific & Insular		12.8	28.9	17.9	12.1	14.5	17.0	17.2	15.5	21.6	20.1	13.7	11.3	15.9
U.S., Region Unknown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign		6.6	13.3	4.3	13.6	6.5	11.7	8.0	8.3	5.4	10.7	8.6	23.5	11.1
Region Unknown		0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.7	0.3	0.0	0.9	0.3

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.
#Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences.

APPENDIX TABLE A-3c. Statistical profile of doctorate recipients, by major field, 1999

Total women

Psychology	Economics	Anthropology and Sociology	Political Sci./ International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Field/ Unknown	PROFESSIONAL/OTHER FIELDS	TOTAL NONSCIENCES
2,447	781	585	253	282	3,819	9,704	400	604	384	1,270	2,658	4,196	342	581	12	935	7,789
66.7	43.0	58.3	32.7	42.4	54.3	36.2	39.6	59.0	61.1	45.3	48.6	64.0	31.0	50.1	42.9	40.8	54.4
87.0	69.9	78.5	77.1	75.9	81.5	71.0	84.0	89.7	63.5	76.5	78.7	84.4	76.0	77.5	25.0	76.3	81.5
2.0	6.1	5.6	5.9	4.6	3.6	6.3	3.3	3.0	15.9	5.1	5.9	2.6	5.6	4.3	16.7	4.9	4.0
3.4	21.0	9.7	13.4	14.9	8.3	18.0	8.0	4.6	16.7	13.2	11.0	6.5	13.5	12.4	8.3	12.7	8.8
7.6	2.9	6.2	3.6	4.6	6.6	4.7	4.8	2.6	3.9	5.2	4.4	6.4	5.0	5.9	50.0	6.1	5.7
26.3	25.4	24.6	29.6	22.7	26.6	29.8	25.0	27.3	25.8	27.2	26.7	14.8	19.0	23.9	8.3	21.9	19.7
45.4	53.3	45.0	43.5	49.6	45.7	48.1	50.0	44.0	49.0	43.3	45.3	56.1	53.2	48.0	16.7	49.5	51.6
8.4	8.6	10.6	6.7	11.7	8.5	6.2	8.3	9.9	9.6	9.4	9.4	13.0	8.5	9.8	0.0	9.2	11.3
6.6	5.2	10.4	8.7	8.9	7.4	6.7	8.0	10.9	7.8	9.4	9.3	3.5	4.4	6.9	0.0	5.9	5.8
0.3	1.0	0.2	1.6	0.4	0.4	0.4	1.0	0.7	0.3	0.4	0.5	1.6	1.5	0.5	0.0	0.9	1.2
13.0	6.5	9.2	9.9	6.7	11.4	8.9	7.8	7.1	7.6	10.2	8.8	10.9	13.5	10.8	75.0	12.6	10.4
32.2	31.2	35.5	33.3	36.1	32.8	31.8	34.7	34.3	34.3	35.4	34.8	45.0	36.8	39.6	33.5	38.2	40.6
58.8	45.3	73.0	52.2	17.4	57.6	56.5	51.3	61.9	0.0	49.2	45.3	37.7	34.5	29.9	0.0	31.2	39.5
75.3	84.9	80.9	79.8	87.9	77.3	65.6	82.0	86.4	86.7	82.4	83.9	87.6	78.4	88.3	25.0	83.9	85.9
9.0	8.6	11.8	10.8	12.6	9.8	9.0	11.3	11.0	11.0	12.0	11.6	20.5	13.0	15.5	11.0	13.6	13.8
7.2	7.0	8.8	8.3	8.0	7.5	7.0	9.0	8.7	8.7	9.0	8.9	8.2	7.7	8.3	5.5	8.0	8.4
31.0	7.7	17.9	11.5	13.8	25.0	37.2	11.8	6.8	8.1	7.9	8.2	5.7	3.8	6.0	0.0	5.1	6.5
23.3	3.1	9.6	7.5	5.3	17.6	21.8	7.8	4.1	2.9	4.2	4.5	1.5	0.6	2.6	0.0	1.8	2.6
3.7	2.0	5.8	3.2	5.7	4.1	11.3	1.8	0.7	1.0	1.0	1.1	1.4	1.5	1.7	0.0	1.6	1.3
1.8	0.3	0.2	0.4	0.0	1.2	1.0	0.3	0.3	1.3	0.6	0.6	0.6	0.6	0.3	0.0	0.4	0.6
2.2	2.3	2.4	0.4	2.8	2.1	3.0	2.0	1.7	2.9	2.1	2.1	2.2	1.2	1.4	0.0	1.3	2.0
53.8	84.3	70.8	75.9	76.6	61.6	52.0	76.3	85.1	80.7	79.8	80.6	81.2	83.6	80.7	25.0	81.1	81.0
21.6	61.1	48.5	50.6	45.0	30.7	22.8	58.3	69.0	71.4	60.1	63.5	65.1	65.8	54.9	16.7	58.4	63.7
13.4	10.1	8.2	5.9	8.9	12.2	15.9	4.8	7.9	3.6	8.8	7.3	5.5	11.7	10.8	0.0	11.0	6.8
5.2	5.5	2.6	8.3	7.1	5.5	4.9	3.0	0.7	0.3	1.3	1.2	3.5	1.5	4.1	0.0	3.1	2.7
8.8	3.1	5.8	5.5	11.0	8.0	4.5	3.0	1.2	0.8	4.6	3.0	3.4	1.8	6.2	0.0	4.5	3.4
4.8	4.5	5.6	5.5	4.6	5.2	3.8	7.3	6.3	4.7	5.0	5.6	3.8	2.9	4.6	8.3	4.1	4.5
15.2	8.1	11.3	12.6	9.6	13.4	10.8	12.0	8.1	11.2	12.3	11.1	13.0	12.6	13.3	75.0	13.8	12.5
22.6	4.2	12.0	7.5	7.8	17.8	27.3	7.5	3.3	4.2	4.5	4.6	3.3	1.8	4.0	0.0	3.1	3.7
8.4	3.5	6.0	4.0	6.0	7.2	9.9	4.3	3.5	3.9	3.4	3.6	2.4	2.0	2.1	0.0	2.0	2.8
34.0	60.6	43.4	50.6	53.2	39.7	34.2	46.8	53.0	56.5	49.2	50.8	60.1	67.8	57.5	8.3	60.6	57.0
19.9	23.7	27.4	25.3	23.4	21.8	17.8	29.5	32.1	24.2	30.6	29.9	21.2	15.8	23.2	16.7	20.4	24.0
831	473	254	128	150	1,518	3,314	187	320	217	625	1,349	2,520	232	334	1	567	4,436
15.9	19.7	30.7	32.0	32.7	24.8	36.8	6.4	5.6	6.5	8.6	7.3	6.0	28.4	15.3	0.0	20.6	8.3
20.9	57.7	53.9	53.9	42.0	32.2	31.1	77.5	80.0	84.3	72.5	76.9	43.0	54.3	56.6	100.0	55.7	54.9
5.4	8.7	5.9	7.0	9.3	5.7	5.3	7.5	5.3	3.7	5.4	5.4	34.9	7.3	9.9	0.0	8.8	22.6
53.4	9.1	5.1	3.9	14.7	33.5	21.8	5.3	3.4	1.4	7.2	5.1	11.6	6.5	14.4	0.0	11.1	9.6
2.3	1.7	2.4	1.6	0.7	2.0	2.9	1.1	3.1	0.5	4.5	3.0	1.5	1.3	1.5	0.0	1.4	1.9
28.2	40.4	50.4	47.7	36.7	35.0	33.0	68.4	54.4	60.4	44.2	52.6	26.9	50.0	49.4	100.0	49.7	37.6
20.2	14.8	18.9	18.0	22.7	20.3	17.4	8.6	9.1	6.9	14.7	11.3	21.2	31.0	18.9	0.0	23.8	18.5
16.7	12.9	9.8	10.9	12.7	14.0	14.8	4.8	12.2	9.2	12.0	10.6	12.2	3.0	11.1	0.0	7.8	11.1
8.9	11.4	7.1	8.6	11.3	8.6	10.6	3.7	5.3	7.4	9.0	7.1	16.7	7.3	7.5	0.0	7.4	12.6
1.9	1.5	1.6	1.6	2.0	2.0	1.9	3.7	2.8	0.9	6.1	4.2	1.5	0.4	1.8	0.0	1.2	2.3
22.0	15.9	10.2	11.7	14.0	18.3	20.1	8.6	13.8	12.0	12.3	12.1	18.6	6.0	9.0	0.0	7.8	15.2
2.0	3.2	2.0	1.6	0.7	1.8	2.1	2.1	2.5	3.2	1.8	1.8	2.9	2.2	2.4	0.0	2.3	2.6
5.7	8.1	7.1	7.8	11.4	7.4	7.3	7.5	8.2	15.2	6.6	8.5	4.5	5.6	4.8	0.0	5.1	5.8
19.9	15.1	12.2	9.4	12.8	15.9	14.7	18.2	16.7	14.3	14.2	15.4	13.2	13.8	14.7	0.0	14.3	14.0
14.0	13.0	18.9	18.0	14.8	14.7	13.3	12.8	15.5	14.3	15.6	15.0	15.3	16.4	18.0	0.0	17.3	15.5
7.6	4.5	5.9	3.1	7.4	6.3	6.2	7.0	7.6	9.7	8.7	8.4	8.5	4.7	6.0	0.0	5.5	8.1
16.4	22.6	15.7	23.4	20.8	18.8	18.3	11.8	17.0	11.1	15.6	14.7	20.6	20.3	19.8	0.0	19.9	18.7
5.1	5.5	3.1	2.3	4.0	4.0	3.4	6.4	7.6	6.5	3.9	5.5	7.1	6.5	4.8	0.0	5.5	6.4
9.1	6.2	5.9	7.0	0.7	6.9	7.9	8.0	9.1	7.4	8.5	8.4	9.8	12.1	6.9	0.0	9.0	9.3
6.3	5.1	6.7	7.8	5.4	6.1	5.8	6.4	2.5	0.9	5.2	4.0	5.8	3.9	4.8	0.0	4.4	5.1
13.9	9.2	16.9	14.1	10.7	13.9	15.1	13.9	12.3	11.1	11.3	11.9	11.0	6.9	12.6	0.0	10.2	11.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.8	10.4	5.5	7.0	12.1	5.8	7.9	7.5	3.5	9.2	10.2	8.1	3.8	8.6	7.8	100.0	8.3	5.7
0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.5	0.0	0.5	0.2	0.2	0.3	1.3	0.0	0.0	0.5	0.3

#Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences.
*Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools. +Includes only recipients with definite employment plans.
Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-4. Statistical profile of doctorate recipients, by race/ethnicity and citizenship, 1999

				Non-U.S.		American Indian†	Asian‡		Non-U.S.		Black		Non-U.S.	
		Total*	U.S.	Perm.	Temp.	Total	Total	U.S.	Perm.	Temp.	Total	U.S.	Perm.	Temp.
Total Number		41,140	27,622	2,300	9,068	219	8,032	1,324	1,194	5,479	2,071	1,596	133	288
Male	%	57.0	52.1	59.8	73.2	44.7	69.0	58.3	59.5	73.7	44.4	37.8	69.2	72.6
Female		42.5	47.9	40.2	26.8	55.3	31.0	41.7	40.5	26.3	55.6	62.2	30.8	27.4
Doctoral Field														
Physical Sciences++	%	15.4	12.5	18.7	23.7	8.2	21.1	16.3	18.8	22.7	7.2	5.7	14.3	12.8
Engineering		13.0	9.0	17.3	24.2	5.5	25.3	20.1	20.9	27.7	6.3	5.3	9.0	11.8
Life Sciences		19.8	18.5	26.3	23.3	12.8	26.0	27.3	33.0	24.2	14.6	11.2	18.8	33.7
Social Sciences		17.1	19.4	11.2	10.7	27.4	10.3	14.2	9.3	9.4	18.1	19.5	17.3	12.8
Humanities		13.3	15.4	13.4	7.1	11.4	5.8	9.5	7.5	4.6	10.0	10.8	12.0	6.6
Education		15.9	19.7	7.8	5.7	27.4	6.1	7.8	5.6	5.8	35.5	38.9	21.8	15.3
Professional/Other		5.6	5.6	5.2	5.4	7.3	5.4	4.8	4.9	5.7	8.2	8.7	6.8	6.9
Median Age at Doct.	Yrs	33.8	34.2	34.6	32.7	39.7	32.8	31.1	34.5	32.8	38.5	38.6	38.3	37.0
Median Time Lapse From Bacc. to Doct.														
Total Time	Yrs	10.4	10.7	11.4	9.8	13.0	10.2	8.5	12.0	10.2	13.2	13.7	12.7	12.0
Registered Time		7.3	7.5	8.0	7.0	8.2	7.3	7.0	8.3	7.2	7.7	7.9	8.0	6.9
Doctoral														
Teaching Assistantships	%	17.4	16.0	21.3	20.7	9.6	18.0	14.0	19.4	18.6	9.2	7.5	13.6	17.0
Res.		25.2	19.6	33.7	40.6	16.2	43.4	31.8	41.7	46.6	12.2	7.9	26.3	29.3
Fellowships/Dissertation		18.3	18.8	17.2	17.0	24.7	16.6	27.1	17.0	13.9	30.4	29.9	23.7	36.3
Own Resources		32.6	40.6	22.1	10.2	44.4	14.8	22.7	17.0	12.4	41.7	48.6	33.1	6.6
Foreign Government		2.7	0.2	3.2	10.3	1.5	5.5	1.1	2.5	7.3	1.5	0.3	0.8	8.9
Employer		3.3	4.1	2.3	1.1	2.5	1.5	2.7	2.2	1.0	4.2	4.8	2.5	1.2
Other	%	0.5	0.7	0.3	0.1	1.0	0.2	0.6	0.3	0.1	0.9	1.0	0.0	0.8
Postdoctoral Plans														
Postdoc study plans		25.9	24.1	33.3	35.7	21.0	36.3	35.4	36.3	36.6	21.7	18.8	30.8	37.2
Postdoc employment plans		63.2	70.3	60.9	56.7	68.9	57.5	59.4	59.1	56.8	68.9	74.6	62.4	52.8
Educ. Institution #	%	34.7	41.1	27.7	25.0	41.6	22.1	24.2	21.7	21.7	47.0	52.9	33.8	28.8
Industry/Business		17.5	16.0	25.2	24.1	8.2	28.0	24.7	30.2	28.3	10.1	9.5	15.8	12.2
Government		4.6	5.3	1.9	4.0	7.3	3.6	4.4	1.8	3.8	5.3	5.5	3.8	5.9
Nonprofit		3.2	4.1	3.2	1.5	4.6	1.9	2.9	3.0	1.5	3.4	3.6	5.3	2.1
Other/Unknown		3.1	3.7	2.9	2.1	7.3	2.0	3.2	2.4	1.5	3.1	3.1	3.8	3.8
Postdoc plans unknown	%	10.9	5.7	5.8	7.5	10.0	6.2	5.1	4.6	6.6	9.4	6.6	6.8	10.1
Definite Postdoc. Study	%	18.9	18.3	22.4	24.2	14.2	24.3	26.3	24.5	23.9	12.7	11.5	14.3	20.8
Seeking Postdoc. Study		7.1	5.8	10.9	11.5	6.8	12.0	9.1	11.7	12.7	9.0	7.3	16.5	16.3
Definite Employment		43.7	49.6	38.5	37.2	43.8	36.1	39.1	35.3	35.7	46.5	51.6	34.6	32.3
Seeking Employment		19.5	20.6	22.4	19.5	25.1	21.4	20.3	23.8	21.1	22.4	22.9	27.8	20.5
Employment Location After Doctorate+		17,982	13,709	885	3,376	96	2,900	518	422	1,956	963	824	46	93
U.S.	%	90.3	97.9	90.0	59.8	94.8	75.6	95.3	91.2	66.9	92.9	98.9	84.4	43.5
Foreign		9.4	1.9	9.7	40.0	4.2	24.1	4.3	8.4	32.8	6.7	0.6	15.6	56.5
Unknown	%	0.3	0.2	0.3	0.3	1.0	0.3	0.4	0.5	0.3	0.4	0.5	0.0	0.0

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APPENDIX TABLE A-4. Statistical profile of doctorate recipients, by race/ethnicity and citizenship, 1999

White				Puerto Rican	Mexican American				Other Hispanic				Unknown Race			
		Non-U.S.					Non-U.S.				Non-U.S.				Non-U.S.	
Total*	U.S.	Perm.	Temp.	Total	Total	U.S.	Perm.	Temp.	Total	U.S.	Perm.	Temp.	Total	U.S.	Perm.	Temp.
26,450	**22,929**	**796**	**2,480**	**292**	**394**	**333**	**11**	**50**	**1,156**	**484**	**126**	**511**	**2,526**	**445**	**40**	**260**
54.9	52.9	59.9	72.6	43.8	50.8	45.0	90.9	80.0	55.4	43.0	45.2	71.4	55.8	64.0	70.0	71.5
45.1	47.1	40.1	27.4	56.2	49.2	55.0	9.1	20.0	44.6	57.0	54.8	28.6	36.9	36.0	30.0	27.3
14.6	12.9	20.4	28.9	10.6	9.4	8.1	18.2	16.0	11.3	7.2	8.7	16.4	16.5	16.2	25.0	21.9
9.9	8.6	14.9	19.8	7.9	7.4	3.3	18.2	32.0	11.0	7.6	7.1	15.5	14.8	13.3	20.0	21.5
18.5	18.7	18.6	18.5	17.5	18.5	16.8	36.4	26.0	23.9	18.2	21.4	30.7	16.0	16.6	17.5	22.7
18.5	19.4	12.2	12.2	22.3	19.3	20.1	27.3	12.0	21.6	30.2	15.1	15.3	19.8	16.6	12.5	11.2
15.6	16.1	20.2	10.9	11.6	14.2	15.6	0.0	8.0	16.9	17.4	31.0	13.5	13.7	17.8	7.5	10.0
17.6	18.9	8.5	4.8	24.0	26.1	30.3	0.0	4.0	11.7	16.7	11.1	4.5	12.4	15.5	5.0	5.4
5.4	5.4	5.2	4.9	6.2	5.1	5.7	0.0	2.0	3.6	2.7	5.6	4.1	6.8	4.0	12.5	7.3
33.7	34.1	33.8	31.5	35.9	35.5	34.7	37.1	37.0	35.1	35.0	35.8	34.5	34.0	34.9	34.8	33.2
10.3	10.6	10.0	8.2	12.5	11.0	10.6	12.3	11.0	10.7	11.2	10.7	10.0	10.5	11.1	12.0	10.0
7.3	7.5	7.5	6.6	8.6	7.4	7.5	10.0	7.0	7.0	7.6	8.0	6.5	7.4	7.6	8.0	7.2
18.0	17.0	24.9	26.2	10.9	11.7	10.9	27.3	13.6	16.9	14.3	21.8	17.8	19.4	16.9	29.0	21.5
21.5	20.1	26.5	33.6	10.9	11.2	9.4	9.1	25.0	17.8	15.7	13.4	20.7	22.6	17.4	25.8	31.4
17.2	16.9	14.9	20.0	34.4	33.9	34.4	27.3	31.8	23.1	23.8	26.1	21.8	21.4	22.1	22.6	20.3
37.5	41.0	27.4	6.9	37.0	37.1	42.5	9.1	4.5	23.8	41.8	31.1	6.3	27.2	38.7	6.5	8.1
1.3	0.1	3.5	11.9	0.4	4.0	0.3	27.3	25.0	16.4	1.0	5.0	32.6	5.9	0.8	12.9	15.7
3.9	4.2	2.4	1.3	6.5	2.1	2.5	0.0	0.0	1.9	3.2	1.7	0.8	2.4	2.8	3.2	1.7
0.6	0.7	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.8	0.0	1.2	1.4	0.0	1.2
25.2	23.9	30.0	37.5	20.9	25.1	25.5	45.5	18.0	23.7	22.9	32.5	23.9	6.5	19.8	17.5	25.0
68.7	70.9	63.4	56.3	73.3	70.6	70.9	54.5	72.0	63.7	62.4	61.9	69.3	15.7	59.6	57.5	36.5
39.6	41.4	33.9	29.2	46.9	49.2	52.0	27.3	36.0	37.5	35.3	43.7	40.3	7.5	30.1	12.5	18.8
16.6	16.3	21.6	19.5	12.7	10.9	9.9	27.3	14.0	12.9	13.6	7.1	14.3	4.9	14.6	35.0	13.8
5.0	5.3	1.8	3.4	5.1	5.6	3.9	0.0	18.0	6.5	6.8	2.4	7.6	1.2	5.4	0.0	1.9
3.9	4.2	3.0	1.5	4.8	3.3	3.6	0.0	2.0	2.7	2.5	4.0	2.7	0.5	2.2	5.0	0.0
3.6	3.7	3.1	2.8	3.8	1.5	1.5	0.0	2.0	4.2	4.1	4.8	4.3	1.6	7.2	5.0	1.9
6.1	5.1	6.5	6.2	5.8	4.3	3.6	0.0	10.0	12.6	14.7	5.6	6.8	77.8	20.7	25.0	38.5
19.3	18.5	21.1	27.9	14.4	15.0	15.6	9.1	12.0	17.2	16.7	24.6	17.0	4.4	15.1	7.5	15.0
5.9	5.4	8.9	9.6	6.5	10.2	9.9	36.4	6.0	6.5	6.2	7.9	6.8	2.1	4.7	10.0	10.0
48.8	50.6	42.2	39.4	48.3	50.5	50.2	45.5	54.0	45.2	42.6	45.2	50.3	10.0	36.6	47.5	25.4
19.9	20.3	21.2	16.9	25.0	20.1	20.7	9.1	18.0	18.5	19.8	16.7	19.0	5.7	22.9	10.0	11.2
12,908	11,594	336	977	141	199	167	5	27	522	206	57	257	253	163	19	66
94.6	98.0	90.1	56.5	97.9	88.4	99.4	60.0	25.9	61.7	95.1	89.3	29.2	83.8	96.9	84.2	51.5
5.1	1.8	9.6	43.3	1.4	11.6	0.6	40.0	74.1	38.3	4.9	10.7	70.8	15.4	3.1	15.8	47.0
0.2	0.2	0.3	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.5

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 187 individuals who did not report their sex and 2,150 individuals who did not report their citizenship at time of doctorate.
**In this table a recipient counts once in each source category from which he or she received support.
Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent.
(Data on the "primary" source of support for doctorate recipients are presented in the Summary Report.)
#Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.
+Includes only recipients with definite employment plans.
†Includes Alaskan Native.
‡Includes Pacific Islander.
++ Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

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APPENDIX TABLE A-5. Doctorate recipients' financial resources in support of doctoral programs, by broad field and sex, 1999

Financial Resource		Total		Physical Sciences*		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof/Other Fields	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Loans (from any source)	N	6,995	6,248	985	325	780	135	1,179	958	1,444	1,942	1,285	1,173	843	1,351	479	364
	V**	32.5%	39.2%	22.1%	23.6%	18.7%	18.6%	28.3%	28.2%	50.4%	57.1%	50.1%	47.9%	40.1%	36.0%	40.0%	44.1%
	H**	100.0	100.0%	14.1%	5.2%	11.2%	2.2%	16.9%	15.3%	20.6%	31.1%	18.4%	18.8%	12.1%	21.6%	6.8%	5.8%
Foreign (non-U.S.) Support	N	2,239	893	371	84	652	59	369	197	337	170	256	214	106	123	148	46
	V	10.4%	5.6%	8.3%	6.1%	15.7%	8.1%	8.9%	5.8%	11.8%	5.0%	10.0%	8.7%	5.0%	3.3%	12.4%	5.6%
	H	100.0	100.0%	16.6%	9.4%	29.1%	6.6%	16.5%	22.1%	15.1%	19.0%	11.4%	24.0%	4.7%	13.8%	6.6%	5.2%
Fellowship, Scholarship	N	11,304	8,669	2,272	796	1,826	422	2,335	2,085	1,734	1,975	1,888	1,723	616	1,228	633	440
	V	52.5%	54.4%	51.1%	57.7%	43.9%	58.2%	56.0%	61.4%	60.5%	58.1%	73.6%	70.3%	29.3%	32.7%	52.8%	53.3%
	H	100.0	100.0%	20.1%	9.2%	16.2%	4.9%	20.7%	24.1%	15.3%	22.8%	16.7%	19.9%	5.4%	14.2%	5.6%	5.1%
Dissertation Grant	N	2,633	2,846	287	111	170	56	426	521	653	832	766	830	149	338	182	158
	V	12.2%	17.9%	6.4%	8.0%	4.1%	7.7%	10.2%	15.3%	22.8%	24.5%	29.9%	33.9%	7.1%	9.0%	15.2%	19.2%
	H	100.0	100.0%	10.9%	3.9%	6.5%	2.0%	16.2%	18.3%	24.8%	29.2%	29.1%	29.2%	5.7%	11.9%	6.9%	5.6%
Teaching Assistant	N	12,679	8,650	3,477	1,109	2,097	378	1,811	1,446	2,030	2,229	1,995	2,008	534	983	735	497
	V	58.9%	54.3%	78.1%	80.4%	50.4%	52.1%	43.5%	42.6%	70.8%	65.6%	77.7%	81.9%	25.4%	26.2%	61.4%	60.2%
	H	100.0	100.0%	27.4%	12.8%	16.5%	4.4%	14.3%	16.7%	16.0%	25.8%	15.7%	23.2%	4.2%	11.4%	5.8%	5.7%
Research Assistant	N	12,677	7,480	3,477	1,047	3,281	575	2,656	1,982	1,570	1,910	644	703	450	857	599	406
	V	58.9%	47.0%	78.1%	75.9%	78.8%	79.3%	63.8%	58.4%	54.8%	56.2%	25.1%	28.7%	21.4%	22.8%	50.0%	49.2%
	H	100.0	100.0%	27.4%	14.0%	25.9%	7.7%	21.0%	26.5%	12.4%	25.5%	5.1%	9.4%	3.5%	11.5%	4.7%	5.4%
Traineeship	N	928	1,103	102	57	90	26	470	527	193	396	25	24	30	60	18	13
	V	4.3%	6.9%	2.3%	4.1%	2.2%	3.6%	11.3%	15.5%	6.7%	11.7%	1.0%	1.0%	1.4%	1.6%	1.5%	1.6%
	H	100.0	100.0%	11.0%	5.2%	9.7%	2.4%	50.6%	47.8%	20.8%	35.9%	2.7%	2.2%	3.2%	5.4%	1.9%	1.2%
Internship or Residency	N	1,452	1,655	236	67	314	52	108	86	563	1,135	81	66	110	215	40	34
	V	6.7%	10.4%	5.3%	4.9%	7.5%	7.2%	2.6%	2.5%	19.6%	33.4%	3.2%	2.7%	5.2%	5.7%	3.3%	4.1%
	H	100.0	100.0%	16.3%	4.0%	21.6%	3.1%	7.4%	5.2%	38.8%	68.6%	5.6%	4.0%	7.6%	13.0%	2.8%	2.1%
Personal Savings	N	11,115	9,025	1,720	551	1,844	303	1,871	1,641	1,783	2,044	1,618	1,418	1,506	2,521	773	547
	V	51.7%	56.7%	38.7%	39.9%	44.3%	41.8%	44.9%	48.3%	62.2%	60.1%	63.1%	57.9%	71.6%	67.2%	64.5%	66.3%
	H	100.0	100.0%	15.5%	6.1%	16.6%	3.4%	16.8%	18.2%	16.0%	22.6%	14.6%	15.7%	13.5%	27.9%	7.0%	6.1%
Other Earnings Graduate	N	8,863	8,452	1,123	362	1,135	167	1,125	1,163	1,644	2,113	1,771	1,665	1,406	2,477	659	505
	V	41.2%	53.1%	25.2%	26.2%	27.3%	23.0%	27.0%	34.3%	57.3%	62.2%	69.0%	67.9%	66.8%	66.0%	55.0%	61.2%
	H	100.0	100.0%	12.7%	4.3%	12.8%	2.0%	12.7%	13.8%	18.5%	25.0%	20.0%	19.7%	15.9%	29.3%	7.4%	6.0%
Family Earnings or Savings†	N	8,513	8,041	1,348	468	1,271	271	1,582	1,510	1,391	2,020	1,426	1,344	931	1,972	564	456
	V	39.6%	50.5%	30.3%	33.9%	30.5%	37.4%	38.0%	44.5%	48.5%	59.4%	55.6%	54.8%	44.2%	52.5%	47.1%	55.3%
	H	100.0	100.0%	15.8%	5.8%	14.9%	3.4%	18.6%	18.8%	16.3%	25.1%	16.8%	16.7%	10.9%	24.5%	6.6%	5.7%
Employer Reimburse Assistance	N	2,399	1,967	309	82	516	61	277	328	263	268	225	182	609	921	200	125
	V	11.2%	12.3%	6.9%	5.9%	12.4%	8.4%	6.6%	9.7%	9.2%	7.9%	8.8%	7.4%	28.9%	24.5%	16.7%	15.2%
	H	100.0	100.0%	12.9%	4.2%	21.5%	3.1%	11.5%	16.7%	11.0%	13.6%	9.4%	9.3%	25.4%	46.8%	8.3%	6.4%
Other	N	239	199	24	5	41	5	27	35	27	51	36	24	57	67	27	12
	V	1.1%	1.2%	0.5%	0.4%	1.0%	0.7%	0.6%	1.0%	0.9%	1.5%	1.4%	1.0%	2.7%	1.8%	2.3%	1.5%
	H	100.0	100.0%	10.0%	2.5%	17.2%	2.5%	11.3%	17.6%	11.3%	25.6%	15.1%	12.1%	23.8%	33.7%	11.3%	6.0%
Unduplicated Total***	N	21,513	15,928	4,450	1,380	4,162	725	4,166	3,395	2,867	3,399	2,566	2,451	2,104	3,753	1,198	825

NOTE: In this table a recipient counts once in each source category from which he or she received support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the body of the Summary Report.) Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. The table excludes 187 individuals for whom gender was not reported.

*Includes mathematics and computer sciences.

**V denotes vertical percentage. H denotes horizontal percentage.

***The 4,206 Ph.D.s who did not report sources of support are omitted from this total. Percentages are based only on known responses.

†This category includes spouses and significant others.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

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APPENDIX TABLE A-6. State of doctoral institution of doctorate recipients, by broad field and sex, 1999

State	Total**		Physical Sciences***		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof./Other Fields	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
U.S. Total*	23,460	17,493	4,821	1,474	4,503	791	4,473	3,620	3,194	3,819	2,777	2,658	2,344	4,196	1,348	935
Alabama	293	195	49	14	59	2	82	52	26	31	12	16	46	68	19	12
Alaska	18	9	7	3	1	0	5	4	1	1	3	0	0	1	1	0
Arizona	424	302	104	27	82	13	67	57	44	54	50	37	54	97	23	17
Arkansas	70	51	8	5	9	1	23	11	2	1	5	3	17	28	6	2
California	2,703	1,996	616	196	626	112	424	389	418	575	331	310	177	328	111	86
Colorado	430	243	111	33	120	13	68	44	67	62	23	31	27	51	14	9
Connecticut	337	236	72	32	28	6	79	52	54	42	82	74	12	23	10	7
Delaware	107	59	24	5	36	5	12	5	14	17	7	11	13	16	1	0
Dist. of	266	247	40	17	21	2	27	40	68	69	48	54	27	48	35	17
Florida	1,003	939	165	41	155	33	111	100	115	196	73	53	285	448	99	68
Georgia	524	408	85	24	143	22	103	80	75	88	45	50	42	110	31	34
Hawaii	95	62	22	5	2	1	25	18	22	17	20	9	4	12	0	0
Idaho	46	34	7	4	7	1	15	7	2	2	1	1	14	19	0	0
Illinois	1,273	928	250	61	242	31	192	153	190	230	201	159	134	242	64	52
Indiana	636	421	131	43	129	26	120	85	70	80	107	88	43	70	36	29
Iowa	354	227	82	19	66	14	85	60	32	36	35	27	42	61	12	10
Kansas	244	189	37	22	36	4	50	33	37	41	34	25	39	57	11	7
Kentucky	188	129	25	5	22	3	43	24	28	26	27	18	20	43	23	10
Louisiana	327	222	66	13	51	9	76	59	34	34	43	43	26	49	31	15
Maine	19	18	7	1	4	2	3	7	2	1	*	2	*	5		
Maryland	547	458	126	34	119	17	140	165	75	98	58	79	16	52	13	13
Massachusetts	1,205	886	317	92	247	56	212	201	179	203	152	177	41	116	57	41
Michigan	859	564	172	44	210	42	157	107	126	140	88	107	66	98	40	26
Minnesota	420	351	63	22	72	11	111	90	39	60	51	59	46	86	38	23
Mississippi	197	175	27	11	15	2	58	20	16	20	17	13	41	95	23	14
Missouri	370	296	53	16	58	8	89	74	50	56	41	44	50	80	29	18
Montana	48	35	19	1	5	1	14	8	0	10	0	0	10	15	0	0
Nebraska	166	125	26	6	12	2	63	26	20	27	15	16	21	37	9	11
Nevada	49	32	12	3	7	0	5	4	11	11	2	4	12	9	0	1
New Hampshire	54	43	18	7	9	2	16	16	5	6	2	8	4	4	0	0
New Jersey	510	312	156	38	90	22	87	52	57	64	82	83	19	35	19	18
New Mexico	138	136	40	20	25	3	23	20	12	26	14	23	19	41	5	3
New York	1,916	1,581	403	128	268	49	359	307	318	415	317	294	144	305	107	83
North Carolina	591	473	129	40	126	36	142	148	72	84	64	71	47	81	11	13
North Dakota	37	30	13	2	3	0	11	5	5	10	1	1	4	12	0	0
Ohio	937	696	160	57	224	32	165	128	99	137	102	93	133	194	54	55
Oklahoma	215	167	31	12	33	7	41	25	29	29	22	20	47	63	12	11
Oregon	247	139	54	17	39	10	80	44	25	22	20	10	20	28	9	8
Pennsylvania	1,190	915	229	77	279	64	166	183	154	171	140	142	122	221	100	57
Puerto Rico	41	96	11	3	3	0	5	1	10	51	1	5	10	35	1	1
Rhode Island	141	96	45	20	22	2	16	15	25	26	26	29	1	3	5	1
South Carolina	247	169	47	14	48	6	59	50	26	17	16	11	26	59	25	12
South Dakota	48	28	4	2	2	1	7	3	5	5	1	0	29	17	0	0
Tennessee	364	302	32	13	59	8	80	66	61	61	51	35	49	108	32	11
Texas	1,588	1,097	308	98	337	53	326	227	188	193	172	157	134	308	123	61
Utah	253	104	65	6	49	3	53	28	42	25	5	10	33	22	6	10
Vermont	26	27	2	0	5	1	12	5	0	9	1	2	6	10	0	0
Virginia	610	410	122	35	125	27	94	72	86	91	57	34	79	110	47	41
Washington	398	307	89	26	64	8	100	97	47	58	46	41	27	70	25	7
West Virginia	78	61	8	1	15	1	12	9	21	9	3	4	19	37	0	0
Wisconsin	490	379	106	45	79	15	121	97	75	74	62	75	27	55	20	18
Wyoming	43	21	13	8	9	1	12	5	4	3	0	0	5	3	0	1

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.
*Includes the 50 states, District of Columbia, and Puerto Rico. **Excludes 187 individuals for whom gender was not reported. ***Includes mathematics and computer sciences.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

APPENDIX TABLE A-7. Institutions granting research doctorates, by major field, 1999

State/Institution	1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. and Amer. Language and Lit.	Other Humanities	Education	Professional/Other/ Unknown Fields
TOTAL ALL INSTITUTIONS	41,140	1,431	2,134	824	1,935	5,337	5,600	1,410	1,116	3,667	3,369	1,011	1,024	3,433	6,557	2,292
ALABAMA																
Alabama A&M Univ	494	19	15	4	25	63	82	27	28	40	17	12	10	6	115	31
Auburn University- Main Campus	7	3	0	0	0	0	0	0	4	0	0	0	0	0	0	0
United States Sports Academy	178	3	6	0	12	31	10	4	22	19	10	9	6	0	38	8
Univ of Alabama-Birmingham	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
Univ of Alabama-Huntsville	113	1	6	1	2	6	58	19	0	12	1	0	0	0	7	0
Univ of Alabama	31	9	0	1	5	16	0	0	0	0	0	0	0	0	0	0
Univ of South Alabama	133	3	3	2	6	10	4	3	0	9	6	3	4	6	51	23
	19	0	0	0	0	0	10	1	2	0	0	0	0	0	6	0
ALASKA																
Univ of Alaska- Fairbanks	27	3	1	6	0	1	7	0	2	0	2	2	0	1	1	1
	27	3	1	6	0	1	7	0	2	0	2	2	0	1	1	1
ARIZONA																
Arizona State Univ-Main Campus	729	32	35	38	28	95	86	18	20	34	64	18	13	57	151	40
Northern Arizona Univ	270	2	9	6	14	54	14	4	0	15	23	12	7	23	73	14
Univ of Arizona	45	0	0	0	0	0	7	0	0	0	6	1	0	3	28	0
	414	30	26	32	14	41	65	14	20	19	35	5	6	31	50	26
ARKANSAS																
U of Arkansas-Fayetteville	121	4	5	0	4	10	17	4	13	3	0	3	4	1	45	8
U of Arkansas-Little Rock	93	3	5	0	4	10	6	4	13	3	0	3	4	1	30	7
U of Arkansas for Med Sci	17	1	0	0	0	0	0	0	0	0	0	0	0	0	15	1
	11	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
CALIFORNIA																
Azusa Pacific University	4,747	183	258	121	257	745	656	112	51	566	441	127	93	425	515	197
Biola University	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Calif Sch Prof Psych-Alameda	15	0	0	0	0	0	0	0	0	7	1	0	0	1	5	1
Calif Sch Prof Psych-Fresno	60	0	0	0	0	0	0	0	0	59	0	0	0	0	0	1
Calif Sch Prof Psych-LA	51	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0
Calif Sch Prof Psych-San Diego	66	0	0	0	0	0	0	0	0	63	0	0	0	0	0	3
California Inst of Integral Studies	67	0	0	0	0	0	0	0	0	67	0	0	0	0	0	0
California Inst of Technology	34	0	0	0	0	0	0	0	0	13	1	0	0	15	5	0
Claremont Graduate Univ	156	19	30	13	14	53	22	0	0	0	5	0	0	0	0	0
Claremont School of Theology	104	0	0	0	6	0	1	0	0	9	21	3	10	22	24	8
Fielding Institute, The	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4
Fuller Theological Seminary in California	75	0	0	0	0	0	1	0	0	36	17	0	0	1	2	18
Graduate Theological Union	65	0	0	0	0	0	0	0	0	23	7	3	0	19	0	13
Hebrew Union College	20	0	0	0	0	0	0	0	0	0	0	0	0	14	0	6
La Sierra Univ	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Loma Linda Univ	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Naval Postgraduate School	19	0	0	0	0	0	12	4	0	3	0	0	0	0	0	0
Pacific Grad School of Psychology	6	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
Pepperdine Univ	28	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0
Rand Grad Schl of Policy Studies	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Research Inst of Scripps Clinic	7	0	0	0	0	0	0	0	0	0	0	0	0	0	48	2
San Diego State Univ	19	0	9	0	0	0	10	0	0	0	6	0	0	0	0	1
Santa Clara University	30	0	1	0	0	1	7	4	0	6	1	0	0	0	10	0
Saybrook Institute	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Stanford University	18	0	0	0	0	0	2	2	0	14	0	0	0	0	0	0
United States Internatl Univ	551	29	26	27	34	168	65	3	3	12	51	15	11	38	37	32
Univ of California-Berkeley	25	0	0	0	0	0	0	0	0	9	0	0	0	0	8	8
Univ of California-Davis	717	38	60	15	59	149	84	25	19	16	86	20	17	78	27	24
Univ of California-Irvine	312	12	19	7	12	53	118	5	18	17	13	6	6	12	14	0
Univ of California-Los Angeles	199	6	17	2	17	34	37	1	0	14	25	8	9	12	4	13
Univ of California-Riverside	588	23	29	11	34	73	82	27	0	28	71	34	10	76	72	18
Univ of California-San Diego	103	5	5	3	11	0	22	1	10	4	13	3	7	9	10	0
Univ of California-San Francisco	282	27	17	19	21	54	67	0	0	14	29	11	2	19	1	1
Univ of California-Santa Barbara	80	0	9	0	0	6	48	13	0	0	4	0	0	0	0	0
Univ of California-Santa Cruz	227	9	12	11	9	39	23	1	0	15	29	15	8	40	13	3
Univ of Laverne	97	10	9	7	11	6	14	0	1	3	19	3	4	7	1	2
Univ of San Diego	43	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0
Univ of San Francisco	19	0	0	0	0	0	0	7	0	0	0	0	0	0	12	0
Univ of Southern California	85	0	0	0	0	0	0	0	0	4	2	0	0	0	78	1
Univ of the Pacific	465	5	15	6	26	104	41	17	0	21	40	6	9	60	77	38
Wright Institute, The	20	0	0	0	0	0	0	2	0	0	0	0	0	0	18	0
	30	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0
COLORADO																
Colorado School of Mines	754	26	41	33	50	135	107	17	28	68	63	2	9	44	97	34
Colorado State Univ	49	5	1	5	4	21	0	0	0	0	10	0	0	0	0	3
Univ of Colorado-Boulder	188	3	17	10	12	32	42	4	28	14	10	0	0	0	14	2
	302	18	22	17	26	80	34	2	0	23	28	2	3	24	12	11

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APPENDIX TABLE A-7. Institutions granting research doctorates, by major field, 1999

State/Institution	1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci	Psychology	Other Social Sciences	History	Eng. and Amer. Language and Lit.	Other Humanities	Education	Professional/Other/ Unknown Fields
COLORADO (continued)																
Univ of Colorado-Colorado Springs	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Univ of Colorado-Denver	38	0	0	0	5	0	0	2	0	0	2	0	0	0	18	11
Univ of Colorado-Health Sci Center	39	0	1	0	0	0	29	9	0	0	0	0	0	0	0	0
Univ of Denver	65	0	0	0	1	0	2	0	0	14	12	0	6	8	15	7
Univ of Northern Colorado	71	0	0	1	2	0	0	0	0	17	1	0	0	12	38	0
CONNECTICUT	574	23	50	13	18	34	111	13	7	30	66	46	17	93	35	18
Univ of Connecticut	227	5	21	4	8	24	37	8	6	20	18	6	6	15	35	14
Univ of New Haven	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wesleyan Univ	13	0	4	0	4	0	4	0	0	0	0	0	0	1	0	0
Yale Univ	333	18	25	9	6	10	70	5	1	10	48	40	11	77	0	3
DELAWARE	166	4	10	5	10	41	13	1	3	12	19	3	7	8	29	1
Univ of Delaware	144	4	10	5	10	41	13	1	3	12	19	3	7	8	7	1
Wilmington College	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
DISTRICT OF COLUMBIA	524	3	31	2	21	23	54	15	0	55	86	20	4	82	76	52
American Univ	61	0	7	0	1	0	1	0	0	11	25	2	0	0	13	1
Catholic Univ of American	99	1	2	0	0	6	1	13	0	10	5	5	2	35	3	16
Gallaudet Univ	7	0	0	0	0	0	0	0	0	2	0	0	0	0	5	0
George Washington Univ	174	2	6	1	20	14	15	0	0	13	21	2	0	6	52	22
Georgetown Univ	97	0	8	0	0	0	21	0	0	2	20	11	0	34	0	1
Howard Univ	86	0	8	1	0	3	16	2	0	17	15	0	2	7	3	12
FLORIDA	1,944	39	68	23	76	188	136	37	38	227	85	14	26	86	734	167
Barry Univ	19	0	0	0	0	0	0	0	0	1	0	0	0	0	9	9
Carlos Albizu Univ- Miami Campus	55	0	0	0	0	0	0	0	0	55	0	0	0	0	0	0
Florida A&M Univ	5	0	0	0	0	0	3	1	0	0	0	0	0	0	0	1
Florida Atlantic Univ-Boca Raton	38	0	0	0	1	9	1	0	0	5	2	0	0	0	13	7
Florida Inst of Technology-Melbourne	27	1	2	3	3	16	2	0	0	0	0	0	0	0	0	0
Florida International Univ	46	0	0	0	2	3	3	0	0	6	2	0	0	0	21	9
Florida State Univ	277	14	15	10	6	8	7	3	0	22	27	10	7	52	64	32
Nova Southeastern Univ	573	0	0	1	28	0	0	0	1	66	0	0	0	2	428	47
Univ of Central Florida	89	11	0	0	6	30	0	0	0	4	0	0	0	0	38	0
Univ of Florida	447	9	34	2	19	89	80	24	35	28	36	3	7	13	39	29
Univ of Miami	133	4	9	4	2	12	24	2	2	20	11	1	5	17	17	3
Univ of Sarasota	87	0	0	0	0	0	0	0	0	0	0	0	0	0	70	17
Univ of South Florida	148	0	8	3	9	21	16	7	0	20	7	0	7	2	35	13
GEORGIA	935	20	61	6	24	166	123	30	30	97	66	16	26	53	152	65
Clark Atlanta Univ	32	0	1	0	0	0	1	0	0	1	12	0	2	1	10	4
Emory University	132	2	13	0	4	0	36	7	0	10	19	13	3	21	3	1
Georgia Inst of Technology-Main Campus	228	10	13	4	14	162	6	0	0	11	0	1	0	2	0	5
Georgia Southern Univ	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Georgia State Univ	150	4	12	0	0	0	11	9	0	27	8	1	3	4	46	25
Institute of Paper Sci & Tech	6	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0
Medical College of Georgia	13	0	0	0	0	0	10	3	0	0	0	0	0	0	0	0
Mercer University	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Univ of Georgia	365	4	22	2	6	1	59	10	27	48	27	1	18	25	85	30
HAWAII	160	5	3	14	5	3	26	7	10	6	34	6	0	25	16	0
Univ of Hawaii at Manoa	160	5	3	14	5	3	26	7	10	6	34	6	0	25	16	0
IDAHO	80	0	5	3	3	8	11	1	10	1	3	1	0	1	33	0
Idaho State Univ	21	0	1	0	3	1	4	0	0	1	1	0	0	1	9	0
Univ of Idaho	59	0	4	3	0	7	7	1	10	0	2	1	0	0	24	0
ILLINOIS	2,201	76	94	20	121	273	229	65	51	194	226	87	59	214	376	116
DePaul Univ	24	0	0	0	2	0	0	0	0	14	0	0	0	8	0	0
Finch U of Hlth Sci-Chicago Med Sch	23	1	0	0	0	0	14	0	0	8	0	0	0	0	0	0
Illinois Inst of Technology	69	3	1	0	17	31	2	0	0	13	0	0	0	0	0	2
Illinois State Univ	45	0	0	0	1	0	3	0	0	5	0	2	2	3	29	0
Inst for Clinical Social Work	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
Loyola Univ of Chicago	196	0	1	0	0	0	16	5	0	26	6	3	4	9	119	7
Lutheran School of Theol-Chicago	9	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7
Northern Illinois Univ	116	0	4	2	4	0	5	0	0	16	13	7	5	1	59	0
Northwestern Univ	309	7	22	3	12	79	34	2	0	26	40	13	7	41	10	13
Roosevelt Univ	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0
Rush Univ	13	1	0	0	0	0	3	9	0	0	0	0	0	0	0	0
Southern Ill Univ-Carbondale	121	1	6	0	1	3	11	4	0	16	7	3	6	11	33	19
Southern Ill Univ-Edwardsville	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0

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State/Institution	1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. and Amer. Language and Lit.	Other Humanities	Education	Professional/Other/ Unknown Fields
ILLINOIS (continued)																
Univ of Chicago	384	21	16	4	25	1	38	0	0	15	95	35	21	77	11	25
Univ of Illinois-Chicago	220	6	14	2	16	29	41	37	0	9	19	7	2	8	18	12
Univ of Illinois-Urbana	643	36	30	9	43	130	62	8	51	45	46	17	12	54	73	27
INDIANA	1,057	37	71	20	46	155	133	36	36	69	81	25	35	135	113	65
Ball State Univ	38	0	0	0	0	0	0	1	0	12	0	0	2	7	15	1
Indiana State Univ	17	0	0	1	0	0	2	0	0	4	0	0	0	0	10	0
Indiana Univ-Bloomington	391	12	16	12	16	0	62	6	0	9	40	15	22	87	59	35
Indiana Univ-Purdue Univ-Indianapolis	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Purdue Univ-Main Campus	468	11	47	6	24	136	53	21	36	31	19	2	4	24	29	25
Univ of Notre Dame	135	14	8	1	6	19	16	0	0	13	22	8	7	17	0	4
IOWA	583	21	46	4	30	80	81	30	34	30	38	5	7	50	105	22
Drake Univ	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Iowa State Univ	257	9	34	4	10	47	39	1	34	10	30	1	1	3	30	4
Maharishi Univ of Management	4	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0
Univ of Iowa	310	12	12	0	20	31	41	28	0	18	8	4	6	47	65	18
Univ of Northern Iowa	7	0	0	0	0	2	0	0	0	0	0	0	0	0	5	0
KANSAS	433	15	28	6	10	40	44	9	30	58	20	11	5	43	96	18
Kansas State Univ	128	6	7	0	6	9	12	0	29	12	8	2	0	1	35	1
Univ of Kansas-Main Campus	278	9	20	6	3	19	31	8	1	40	12	9	5	42	56	17
Wichita State Univ	27	0	1	0	1	12	1	1	0	6	0	0	0	0	5	0
KENTUCKY	317	2	9	4	15	25	45	11	11	31	23	7	8	30	63	33
Southern Bapt Theol Seminary	19	0	0	0	0	0	0	0	0	0	0	0	0	9	0	10
Spalding Univ	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0
Univ of Kentucky	203	2	5	4	13	16	29	10	11	20	19	7	8	13	23	23
Univ of Louisville	78	0	4	0	2	9	16	1	0	11	4	0	0	8	23	0
LOUISIANA	557	11	17	14	37	62	75	41	23	33	35	14	23	49	75	48
Grambling State Univ	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Louisiana St U & A&M & Herbert Laws Ctr	253	9	10	13	15	26	17	10	23	20	18	7	8	22	39	16
Louisiana St U Med Ctr	13	0	0	0	0	0	7	6	0	0	0	0	0	0	0	0
Louisiana St U -Shreveport	13	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
Louisiana Tech Univ	26	0	0	0	1	13	0	0	0	0	0	0	0	0	2	10
New Orleans Bapt Theol Seminary	21	0	0	0	0	0	0	0	0	0	0	0	0	7	1	13
Southern Univ and A&M College	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Tulane Univ of Louisiana	140	2	3	0	8	19	30	24	0	8	11	7	8	12	0	8
Univ of Louisiana- Lafayette	37	0	0	0	13	3	5	0	0	0	1	0	7	8	0	0
Univ of Lousiana- Monroe	6	0	0	0	0	0	3	1	0	0	0	0	0	0	2	0
Univ of New Orleans	35	0	4	1	0	1	0	0	0	5	5	0	0	0	19	0
MAINE	37	3	1	4	0	6	4	1	5	3	0	2	0	1	6	1
Univ of Maine	37	3	1	4	0	6	4	1	5	3	0	2	0	1	6	1
MARYLAND	1,006	44	23	21	72	137	184	104	17	62	111	23	17	97	68	26
Johns Hopkins Univ	341	12	6	3	11	47	94	81	0	6	41	13	6	21	0	0
Loyola College	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Morgan State Univ	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Peabody Inst of Johns Hopkins Univ	21	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0
Uniformed Svcs. Univ of Hlth Sci	12	0	0	0	0	0	8	0	0	4	0	0	0	0	0	0
Univ of Maryland-Baltimore	51	0	3	0	0	0	36	16	0	0	1	0	0	0	1	4
Univ of Maryland-Baltimore County	57	1	3	1	13	9	8	0	0	13	5	0	0	2	0	2
Univ of Maryland-College Park	504	31	11	16	48	81	38	7	17	36	64	10	11	53	61	20
Univ of Maryland-Eastern Shore	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	2,132	131	146	45	96	312	318	87	15	104	281	74	45	218	158	102
American Internatl College	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Boston College	98	1	12	0	0	0	7	11	0	9	13	8	2	12	16	7
Boston Univ	300	16	9	1	10	17	48	17	1	27	29	4	10	63	34	14
Brandeis Univ	103	5	13	0	10	0	16	2	0	8	28	8	4	8	0	1
Clark Univ	29	2	3	0	0	0	4	0	0	5	12	0	0	2	0	1
Harvard Univ	564	19	28	7	23	14	112	43	1	9	102	46	14	86	40	20
Mass Coll Pharm & Allied Health Sci	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Mass Inst of Technology	487	54	34	32	36	194	39	2	0	6	43	5	0	14	1	27
New England Conserv of Music	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Northeastern Univ	80	9	13	0	0	16	15	1	0	9	13	0	0	1	0	3
Simmons College	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Smith College	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13

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APPENDIX TABLE A-7. Institutions granting research doctorates, by major field, 1999

State/Institution	1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. and Amer. Language and Lit.	Other Humanities	Education	Professional/Other/ Unknown Fields
MASSACHUSETTS (continued)																
Springfield College	9	0	0	0	0	0	0	2	0	0	0	0	0	0	7	0
Tufts Univ	78	4	4	0	0	9	29	0	0	7	13	0	6	6	0	0
Univ of Massachusetts-Amherst	269	16	17	3	13	39	35	7	13	21	21	3	9	23	37	12
Univ of Massachusetts-Boston	18	0	0	2	0	0	1	0	0	3	7	0	0	0	5	0
Univ of Massachusetts-Lowell	46	4	9	0	4	12	1	2	0	0	0	0	0	0	14	0
Univ of Massachusetts Med Sch-Worcester	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Inst	17	1	2	0	0	11	3	0	0	0	0	0	0	0	0	0
MICHIGAN	1,428	48	77	20	72	253	160	59	47	125	142	30	43	122	164	66
Andrews Univ	27	0	0	0	0	0	0	0	0	6	0	0	0	6	11	4
Central Michigan Univ	5	0	0	0	1	0	0	0	0	3	0	1	0	0	0	0
Eastern Michigan Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Michigan State Univ	388	14	23	1	22	45	48	4	39	36	45	5	11	18	43	34
Michigan Tech Univ	36	1	0	1	0	22	4	0	4	0	0	0	0	4	0	0
Oakland Univ	25	1	1	1	0	14	2	1	0	0	0	0	0	0	5	0
Univ of Detroit Mercy	10	0	0	0	0	2	0	0	0	8	0	0	0	0	0	0
Univ of Michigan-Ann Arbor	655	25	35	16	39	145	65	42	4	40	71	20	20	78	35	20
Wayne State Univ	226	5	18	0	9	25	41	12	0	20	15	1	9	15	50	6
Western Michigan Univ	52	2	0	1	1	0	0	0	0	12	11	3	3	1	16	2
MINNESOTA	774	24	32	6	23	83	98	62	41	55	44	23	16	72	133	62
Luther Seminary	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mayo Graduate School	20	0	0	0	0	4	16	0	0	0	0	0	0	0	0	0
Univ of Minnesota-Twin Cities	656	24	32	6	23	79	82	52	41	37	42	23	16	68	97	34
Univ of St Thomas	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
Walden University	75	0	0	0	0	0	0	10	0	18	2	0	0	4	14	27
MISSISSIPPI	372	0	27	6	5	17	35	10	33	29	7	10	11	9	136	37
Delta State Univ	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
Jackson State Univ	25	0	0	4	0	0	0	1	0	0	0	0	0	0	15	5
Mississippi State Univ	112	0	10	0	3	9	10	2	33	2	4	4	0	0	29	6
Reformed Theological Seminary	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Univ of Mississippi- Main Campus	106	0	6	1	1	6	10	5	0	11	3	4	8	6	26	19
Univ of Mississippi-Med Ctr	13	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
Univ of Southern Mississippi	106	0	11	1	1	2	2	2	0	16	0	2	3	2	59	5
MISSOURI	666	9	33	5	22	66	122	21	20	54	52	8	20	57	130	47
Concordia Seminary	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
St. Louis Univ- Main Campus	132	0	0	1	0	0	25	6	0	13	7	0	4	12	49	15
Univ of Missouri-Columbia	230	3	8	0	6	17	34	8	20	22	20	4	8	7	58	15
Univ of Missouri-Kansas City	65	2	3	0	2	2	6	3	0	3	2	3	2	18	17	2
Univ of Missouri-Rolla	44	1	9	2	2	30	0	0	0	0	0	0	0	0	0	0
Univ of Missouri-St Louis	29	0	3	0	0	0	5	2	0	7	7	0	0	0	5	0
Washington Univ	164	3	10	2	12	17	52	2	0	9	16	1	6	20	1	13
MONTANA	83	5	11	2	2	6	14	0	8	10	0	0	0	0	25	0
Montana State Univ-Bozeman	43	5	6	1	1	6	7	0	4	0	0	0	0	0	13	0
Univ of Montana-Missoula	40	0	5	1	1	0	7	0	4	10	0	0	0	0	12	0
NEBRASKA	291	9	15	2	6	14	46	8	35	26	21	7	10	14	58	20
Creighton Univ	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Univ of Nebraska-Lincoln	251	9	13	2	6	14	19	1	35	26	18	7	10	14	57	20
Univ of Nebraska-Med Center	28	0	2	0	0	0	19	7	0	0	0	0	0	0	0	0
Univ of Nebraska-Omaha	4	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0
NEVADA	85	7	3	5	0	8	10	0	1	18	5	2	4	0	21	1
Univ of Nevada-Las Vegas	23	0	0	0	0	1	1	0	1	0	4	0	0	0	15	1
Univ of Nevada-Reno	62	7	3	5	0	7	9	0	0	18	1	2	4	0	6	0
NEW HAMPSHIRE	97	6	8	3	8	11	30	1	1	6	5	4	5	1	8	0
Dartmouth College	49	2	6	1	7	8	22	1	0	2	0	0	0	0	0	0
Univ of New Hampshire-Main Campus	48	4	2	2	1	3	8	0	1	4	5	4	5	1	8	0
NEW JERSEY	822	51	54	26	63	112	112	9	18	47	74	39	30	96	54	37
Drew Univ	26	0	0	0	0	0	0	0	0	0	0	1	12	3	1	4
Fairleigh Dickinson Univ- All Campuses	14	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0
New Jersey Inst of Technology	39	1	2	3	17	15	0	0	0	0	0	0	0	0	1	0
Princeton Theol Seminary	18	0	0	0	0	0	0	0	0	0	0	0	0	10	0	8
Princeton University	254	33	21	8	21	36	22	0	0	5	38	16	6	44	0	4
Rutgers Univ-New Brunswick	347	12	14	15	24	48	57	8	17	18	30	22	12	34	26	10

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NEW JERSEY (continued)																
Rutgers Univ-Newark	35	1	6	0	0	0	8	1	1	1	6	0	0	0	0	11
Seton Hall Univ	46	0	11	0	0	0	0	0	0	9	0	0	0	0	26	0
Stevens Inst of Technology	18	4	0	0	1	13	0	0	0	0	0	0	0	0	0	0
Univ of Med & Dent of NJ	25	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0
NEW MEXICO	276	22	13	3	22	28	28	4	12	19	19	8	13	17	60	8
New Mexico Inst of Mining & Tech	7	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0
New Mexico State Univ-Main Campus	78	11	4	0	6	12	5	0	12	7	0	0	0	2	15	4
Univ of New Mexico-Main Campus	191	10	8	0	15	15	23	4	0	12	19	8	13	15	45	4
NEW YORK	3,511	150	154	46	184	317	527	80	62	411	327	88	128	397	450	190
Adelphi Univ	28	0	0	0	1	0	0	4	0	21	0	0	0	0	0	2
Albany Medical College	20	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0
Alfred Univ	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
City U of NY-Grad Sch/U Ctr	275	10	18	5	13	23	37	5	0	45	32	6	16	50	2	13
Clarkson Univ	19	2	5	0	0	11	1	0	0	0	0	0	0	0	0	0
Columbia Univ in the City of New York	416	13	22	10	18	38	51	13	0	42	54	25	19	70	19	22
Cornell Univ Medical College	33	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0
Cornell Univ-Endowed Colleges	485	35	29	4	33	57	89	12	58	12	55	10	14	40	19	18
Fordham University	98	0	0	0	0	0	2	0	0	30	7	5	6	7	35	6
Hebrew Union College-Jewish Inst of Religion	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Hofstra Univ	47	0	0	0	0	0	0	0	0	34	0	0	0	0	13	0
Jewish Theol Sem of America	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Long Island Univ-Brooklyn Campus	15	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0
New School for Social Research	57	0	0	0	0	0	0	0	0	27	21	0	0	7	0	2
New York Medical College	12	0	0	0	0	0	11	1	0	0	0	0	0	0	0	0
New York Univ	410	9	5	0	34	0	55	21	0	43	24	15	28	100	38	38
Pace Univ-New York	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Polytechnic Univ	28	2	4	0	1	21	0	0	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Inst	115	11	6	4	9	65	4	0	0	0	5	0	0	4	0	7
Rockefeller Univ	18	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0
St Johns Univ-New York	67	0	2	0	0	0	7	3	0	18	0	5	2	0	30	0
State Univ of NY-Albany	151	10	7	5	17	1	7	1	0	27	26	0	3	7	24	16
State Univ of NY-Binghamton	76	0	5	1	4	6	1	0	0	11	16	5	10	10	3	4
State Univ of NY-Buffalo	269	10	16	1	9	34	48	13	0	23	22	1	13	17	40	22
State Univ of NY-Stony Brook	219	22	16	14	17	19	39	0	0	24	21	10	7	28	2	0
SUNY College of Optometry	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SUNY Coll-Environ Sci & Forestry	12	0	1	1	0	1	4	0	4	0	0	0	0	0	0	1
SUNY Upstate Med Univ	5	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0
SUNY-Hlth Sci Ctr-Brooklyn	14	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0
Syracuse Univ	154	3	6	1	17	13	6	0	0	17	25	3	3	11	33	16
Teachers College at Columbia Univ	183	0	0	0	0	0	0	0	0	0	0	0	0	13	1	0
The Juilliard School	14	0	0	0	0	0	0	0	0	0	0	0	0	0	182	1
Union Theol Seminary	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Univ of Rochester	186	22	12	0	11	19	42	6	0	10	17	3	7	31	4	2
Yeshiva Univ	60	0	0	0	0	0	35	0	0	11	2	0	0	0	5	7
NORTH CAROLINA	1,105	27	71	25	59	167	212	58	41	66	90	25	38	72	130	24
Duke Univ	249	11	14	4	10	34	52	2	2	22	29	12	20	33	0	4
East Carolina Univ	21	0	0	0	0	0	10	0	0	0	0	0	0	0	11	0
North Carolina A & T St Univ	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
North Carolina St U-Raleigh	354	3	18	13	24	112	60	0	39	15	13	0	0	0	56	1
U of N Carolina-Chapel Hill	374	11	31	8	22	11	70	51	0	17	48	13	15	34	24	19
U of N Carolina-Charlotte	10	0	0	0	1	5	0	0	0	0	0	0	0	0	2	0
U of N Carolina-Greensboro	61	0	0	0	0	0	4	0	12	0	0	3	5	37	0	0
Wake Forest University	31	2	8	0	0	0	20	1	0	0	0	0	0	0	0	0
NORTH DAKOTA	68	0	11	0	4	3	9	1	6	15	0	1	0	1	17	0
North Dakota State Univ-Main Campus	26	0	9	0	4	3	3	1	6	0	0	0	0	0	0	0
Univ of North Dakota-Main Campus	42	0	2	0	0	0	6	0	0	15	0	1	0	1	17	0
OHIO	1,638	45	100	23	49	257	204	59	30	160	77	43	38	117	327	109
Air Force Inst of Tech	22	3	0	0	2	17	0	0	0	0	0	0	0	0	0	0
Bowling Green State Univ-Main Campus	93	0	5	2	0	0	4	0	0	22	2	2	7	24	17	8
Case Western Reserve Univ	164	4	18	0	2	43	41	15	1	9	4	4	2	3	0	18
Cleveland State Univ	38	0	3	0	0	2	5	0	0	2	2	0	0	0	15	9
Hebrew Union Coll-Jewish Inst of Religion	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Kent State Univ-Main Campus	141	5	1	3	6	0	12	3	0	38	7	3	4	3	43	13
Medical College of Ohio	14	0	0	0	0	0	13	1	0	0	0	0	0	0	0	0
Miami Univ-Oxford	49	0	5	1	0	0	9	0	0	10	3	6	1	5	9	0
Ohio State Univ-Main Campus	549	7	21	11	26	74	75	24	28	31	42	16	14	44	101	35
Ohio Univ-Main Campus	131	11	6	0	7	9	6	1	1	10	0	6	3	4	48	19

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OHIO (continued)																
Univ of Akron-Main Campus	108	10	22	0	1	33	2	0	0	15	4	1	0	0	20	0
Univ of Cincinnati-Main Campus	227	5	15	6	2	56	26	14	0	15	13	5	1	29	35	5
Univ of Dayton	20	0	0	0	0	9	1	0	0	0	0	0	0	0	10	0
Univ of Toledo	68	0	4	0	2	13	4	1	0	8	0	0	6	1	27	2
Wright State Univ-Main Campus	8	0	0	0	1	1	6	0	0	0	0	0	0	0	0	0
Youngstown State Univ	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
OKLAHOMA	383	9	12	13	9	40	42	13	11	28	30	7	6	29	111	23
Oklahoma State Univ-Main Campus	198	4	5	4	6	19	13	2	11	14	15	3	2	6	84	10
Univ of Oklahoma-Norman Campus	171	5	7	9	3	17	28	11	0	7	15	4	2	23	27	13
Univ of Tulsa	14	0	0	0	0	4	1	0	0	7	0	0	2	0	0	0
OREGON	386	11	15	21	24	49	71	15	38	24	23	2	12	16	48	17
Oregon Grad Inst of Sci & Tech	15	0	0	2	1	9	3	0	0	0	0	0	0	0	0	0
Oregon Health Sciences Univ	25	0	0	0	0	0	21	3	0	1	0	0	0	0	0	0
Oregon State Univ	162	5	7	8	12	35	24	9	38	4	3	1	0	0	16	0
Portland State Univ	32	0	1	3	0	4	1	1	0	2	5	0	0	0	7	8
Univ of Oregon	152	6	7	8	11	1	22	2	0	17	15	1	12	16	25	9
PENNSYLVANIA	2,115	66	107	22	111	348	249	81	20	178	148	38	61	185	343	158
Bryn Mawr College	22	2	0	0	0	0	1	0	0	3	1	0	0	9	0	6
Carnegie Mellon Univ	162	6	5	0	34	76	8	0	0	6	12	1	0	3	0	11
Drexel Univ	56	2	3	1	4	25	6	0	0	9	0	0	0	0	0	6
Duquesne Univ	29	0	0	0	0	0	0	0	0	16	0	0	6	5	0	2
Indiana Univ of Pennsylvania	56	0	0	0	0	0	0	0	0	7	2	0	21	9	17	0
Lehigh Univ	95	4	5	0	6	35	5	0	0	8	3	2	4	0	19	4
MCP Hahnemann University	39	0	0	0	0	0	16	5	0	18	0	0	0	0	0	0
Pennsylvania State Univ-Main Campus	580	23	36	13	10	142	61	11	20	35	32	6	7	33	113	38
Phila Coll of Pharm & Sci	7	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0
Temple Univ	251	3	7	0	9	2	19	9	0	42	18	10	12	36	61	23
Thomac Jefferson Univ	27	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
Univ of Pennsylvania	384	20	18	4	26	38	64	14	0	13	49	13	5	46	39	35
Univ of Pittsburgh-Main Campus	360	6	28	4	22	30	42	31	0	21	31	6	6	36	70	27
Villanova Univ	7	0	4	0	0	0	0	0	0	0	0	0	0	3	0	0
Westminster Theol Seminary	11	0	0	0	0	0	0	0	0	0	0	0	0	5	0	6
Widener Univ-Main Campus	29	0	0	0	0	0	0	5	0	0	0	0	0	0	24	0
PUERTO RICO	141	1	9	4	0	3	9	0	1	61	0	2	0	4	45	2
Carlos Albizu University-San Juan Campus	40	0	0	0	0	0	0	0	0	40	0	0	0	0	0	0
Inter Amer U PR-Metro	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0
Univ of Puerto Rico-Mayaguez	8	0	0	4	0	3	0	0	1	0	0	0	0	0	0	0
Univ of Puerto Rico-Med Science Campus	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Univ of Puerto Rico-Rio Piedras	62	1	9	0	0	0	5	0	0	21	0	2	0	4	18	2
RHODE ISLAND	237	13	11	15	26	24	24	5	2	25	26	8	11	36	4	7
Brown Univ	153	13	6	6	20	13	17	0	0	7	24	6	6	34	1	0
Salve Regina Univ	5	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1
Univ of Rhode Island	79	0	5	9	6	11	7	5	2	18	2	0	5	0	3	6
SOUTH CAROLINA	416	5	29	10	17	54	71	29	9	16	27	6	11	10	85	37
Clemson University	112	3	11	1	7	37	17	0	9	1	7	0	0	0	10	9
Medical Univ of South Carolina	30	0	0	0	0	0	29	1	0	0	0	0	0	0	0	0
South Carolina State Univ	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Univ of South Carolina-Columbia	269	2	18	9	10	17	25	28	0	15	20	6	11	10	70	28
SOUTH DAKOTA	77	0	6	0	0	3	6	0	5	7	3	0	0	1	46	0
S Dakota Sch of Mines & Tech	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
South Dakota State Univ	16	0	6	0	0	0	2	0	5	0	3	0	0	0	0	0
Univ of South Dakota	58	0	0	0	0	0	4	0	0	7	0	0	0	1	46	0
TENNESSEE	667	6	23	1	16	67	109	23	14	82	40	18	20	48	157	43
East Tennessee State Univ	30	0	0	0	0	0	4	0	0	0	0	0	0	0	26	0
Meharry Medical College	13	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
Mid-America Baptist Sem	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
Middle Tennessee State Univ	12	0	2	0	0	0	1	0	0	0	2	1	1	0	5	0
Tennessee State Univ	45	0	0	0	0	0	0	0	0	9	0	0	0	0	34	2
Tennessee Technological Univ	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
Univ of Memphis	96	0	2	0	7	7	1	2	0	26	2	4	0	5	28	12
Univ of Tennessee-Knoxville	256	4	14	1	8	32	34	14	14	29	25	7	13	11	32	18
Univ of Tennessee-Memphis	17	0	0	0	0	0	13	4	0	0	0	0	0	0	0	0

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APPENDIX TABLE A-7. Institutions granting research doctorates, by major field, 1999

State/Institution	1999 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. and Amer. Language and Lit	Other Humanities	Education	Professional/Other/ Unknown Fields
TENNESSEE (continued)																
Vanderbilt Univ	182	2	5	0	1	20	43	3	0	18	11	6	6	28	32	7
TEXAS	2,697	96	126	71	113	398	402	86	67	209	172	41	70	220	442	184
Baylor College of Medicine	46	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0
Baylor Univ	43	2	3	1	3	0	3	0	0	0	1	0	5	8	17	0
Dallas Theological Seminary	7	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4
Lamar Univ-Beaumont	3	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0
Rice Univ	122	11	13	7	8	29	14	1	0	3	13	4	2	17	0	0
St. Mary's Univ	4	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0
Sam Houston State Univ	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
Southern Methodist Univ	40	1	0	2	6	20	3	0	0	2	3	0	0	3	0	0
Southwestern Baptist Theol Sem	52	0	0	0	0	0	0	0	0	4	0	0	0	23	2	23
Stephen F Austin St Univ	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Texas A&M Univ	501	12	39	26	25	104	66	7	51	19	35	2	8	5	79	23
Texas A&M Univ-Commerce	44	0	0	0	0	0	0	0	0	7	0	0	0	0	37	0
Texas A&M Univ-Kingsville	24	0	0	0	0	0	0	0	1	0	0	0	0	0	23	0
Texas Christian Univ	30	3	5	0	0	0	0	0	0	9	0	5	4	4	0	0
Texas Southern Univ	25	0	0	2	0	0	3	0	0	0	0	0	0	0	20	0
Texas Tech Univ	189	1	9	1	5	20	16	0	14	32	7	6	13	16	23	26
Texas Woman's Univ	66	0	0	0	0	0	4	20	0	15	3	0	1	6	12	5
Univ of Dallas	5	0	0	0	0	0	0	0	0	0	2	0	1	2	0	0
Univ of Houston-University Park	200	5	14	3	13	27	13	4	0	24	10	3	10	7	57	10
Univ of North Texas	174	7	0	2	12	1	11	0	0	30	3	4	14	18	54	18
Univ of North Texas-Hlth Sci Ctr at Ft Worth	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Univ of St. Thomas	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Univ of Texas-Arlington	80	3	5	1	7	20	5	0	0	6	5	1	2	10	0	15
Univ of Texas-Austin	752	44	33	14	30	162	56	20	0	37	76	15	9	89	116	51
Univ of Texas-Dallas	53	4	5	6	4	4	6	0	0	4	4	1	1	5	0	9
Univ of Texas-El Paso	15	0	0	6	0	9	0	0	0	0	0	0	0	0	0	0
U Tex-Hlth Sci Ctr	83	0	0	0	0	0	59	22	0	0	2	0	0	0	0	0
U Tex-Hlth Sci Ctr-San Antonio	32	3	0	0	0	0	20	9	0	0	0	0	0	0	0	0
U Tex-Med Branch-Galveston	37	0	0	0	0	0	30	3	0	0	1	0	0	3	0	0
U Tex-Southwestern Med Ctr-Dallas	57	0	0	0	0	0	43	0	0	14	0	0	0	0	0	0
UTAH	365	11	40	6	16	54	55	10	17	50	19	3	4	9	55	16
Brigham Young Univ	93	2	6	0	3	15	8	1	0	25	2	0	0	2	28	1
Univ of Utah	194	6	31	5	13	32	32	9	0	12	13	3	4	7	13	14
Utah State Univ	78	3	3	1	0	7	15	0	17	13	4	0	0	0	14	1
VERMONT	53	0	1	0	1	6	16	0	1	9	0	0	0	3	16	0
Middlebury College	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
Univ of Vermont and State Agr Coll	50	0	1	0	1	6	16	0	1	9	0	0	0	0	16	0
VIRGINIA	1,026	42	37	29	50	153	108	31	29	100	79	35	12	44	189	88
College of William & Mary	62	11	1	9	6	0	8	0	0	0	0	10	0	2	15	0
George Mason Univ	114	4	1	2	16	10	11	10	0	23	15	0	1	0	16	5
Hampton University	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Old Dominion Univ	62	2	0	4	7	15	6	2	0	5	6	0	0	0	0	15
Regent Univ	9	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7
Union Theol Seminary in Virginia	8	0	0	0	0	0	0	0	0	0	0	1	0	4	0	3
Univ of Virginia- Main Campus	333	15	17	9	12	49	38	6	1	27	32	21	11	34	55	6
Virginia Commonwealth Univ	99	0	5	0	0	2	27	11	0	24	11	0	0	2	4	13
Virginia Polytech Inst & St Univ	334	5	13	5	9	77	18	2	28	21	15	3	0	0	99	39
WASHINGTON	706	32	27	26	30	72	110	48	39	32	73	18	21	49	97	32
Gonzaga Univ	12	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2
Seattle Pacific Univ	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
Seattle Univ	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0
Univ of Washington	521	27	23	26	27	56	82	41	20	20	54	13	19	46	45	22
Washington State Univ	145	5	4	0	3	16	28	7	19	12	19	5	2	3	14	8
WEST VIRGINIA	140	0	2	2	5	17	18	1	2	24	6	4	3	0	56	0
Marshall University	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
West Virginia Univ	137	0	2	2	5	17	15	1	2	24	6	4	3	0	56	0
WISCONSIN	873	34	54	20	44	95	151	29	38	52	98	23	29	85	83	38
Marquette Univ	59	0	5	0	1	7	4	0	0	6	0	3	6	17	7	3
Medical College of Wisconsin	19	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0
Univ of Wisconsin-Madison	685	31	40	19	34	83	119	21	38	32	74	20	14	64	66	30
Univ of Wisconsin-Milwaukee	110	3	9	1	9	5	9	8	0	14	24	0	9	4	10	5
WYOMING	64	1	8	6	6	10	10	1	6	6	1	0	0	0	8	1
Univ of Wyoming	64	1	8	6	6	10	10	1	6	6	1	0	0	0	8	1

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE A-7. Top 50 doctorate-granting institutions, 1999

Rank	Institution	Number
1.	The University of Texas at Austin	752
2.	University of California-Berkeley	717
3.	University of Wisconsin-Madison	685
4.	University of Minnesota-Twin Cities	656
5.	University of Michigan-Ann Arbor	655
6.	University of Illinois at Urbana	643
7.	University of California-Los Angeles	588
8.	Pennsylvania State University-Main Campus	580
9.	Nova Southeastern University	573
10.	Harvard University	564
11.	Stanford University	551
12.	Ohio State University-Main Campus	549
13.	University of Washington	521
14.	University of Maryland-College Park	504
15.	Texas A & M University	501
16.	Massachusetts Institute of Technology	487
17.	Cornell University-Endowed Colleges	485
18.	Purdue University-Main Campus	468
19.	University of Southern California	465
20.	University of Florida	447
21.	Columbia University in the City of New York	416
22.	University of Arizona	414
23.	New York University	410
24.	Indiana University-Bloomington	391
25.	Michigan State University	388
26.	University of Chicago	384
26.	University of Pennsylvania	384
28.	University of North Carolina at Chapel Hill	374
29.	University of Georgia	365
30.	University of Pittsburgh-Main Campus	360
31.	North Carolina State University at Raleigh	354
32.	Rutgers University-New Brunswick	347
33.	Johns Hopkins University	341
34.	Virginia Polytechnic Institute & State Univ	334
35.	Yale University	333
35.	University of Virginia-Main Campus	333
37.	University of California-Davis	312
38.	University of Iowa	310
39.	Northwestern University	309
40.	University of Colorado at Boulder	302
41.	Boston University	300
42.	University of California-San Diego	282
43.	University of Kansas Main Campus	278
44.	Florida State University	277
45.	CUNY Graduate School & University Center	275
46.	Arizona State University-Main Campus	270
47.	University of Massachusetts-Amherst	269
47.	SUNY At Buffalo	269
47.	University of South Carolina at Columbia	269
50.	Iowa State University	257

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

APPENDIX B: Trend Tables, 1989-1999

Appendix B includes the following two tables:

B-1: Number of Doctorate Recipients, by Subfield, 1989-1999

B-2: Number of Doctorate Recipients, by Sex, Race/Ethnicity, and Citizenship, 1979, 1984, and 1989-1999

TABLE B-1: Table B-1 presents data for the most recent decade by subfield of doctorate. In general, the subfields correspond to the fields on the questionnaire's Specialties List located in the questionnaire at the back of the Summary Report; some subfields, however, do not appear on the current Specialties List because they are no longer included in the survey taxonomy. A dash (—) in a column indicates that the field was not on the Specialties List for that year.

Field groupings in this table may differ from those in reports published by Federal sponsors of the Survey of Earned Doctorates (SED); see inside the back cover of the Summary Report for a description of field groupings as reported in these tables. The "general" field categories—for example, "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—for example, "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields.

The seven tables in Appendix A present additional information on the most recent cohort of research doctorate recipients by field of doctorate.

TABLE B-2: Table B-2 displays, by sex and citizenship, data on the race/ethnicity of doctorate recipients for 1979, 1984, and the past decade. Table B-2 contains three panels, each displayed on a separate page. The first panel includes all doctorates; the others disaggregate the data by sex.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use

in Federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the reclassification of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980, the item was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican, and other Hispanic to provide more detail for users of the racial/ethnic data; and (2) respondents were asked to check only one racial category. (Before 1980, doctorate recipients could check more than one category to indicate their race.) The item was modified again 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first indicate whether or not they are Hispanic, and then check one of four racial group categories (American Indian, Asian, black, or white). In Table B-2, *doctorate recipients who reported Hispanic heritage, regardless of racial designation, are counted as Hispanic*. The remaining survey respondents are then counted in their respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

Tables A-2 and A-4 in Appendix A present additional information on the most recent cohort of doctorate recipients by race/ethnicity.

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield, 1989-1999

Subfield	Year of Doctorate										
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL ALL FIELDS	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555*	42,683**	41,140***
PHYSICAL SCIENCES#	5,455	5,859	6,280	6,502	6,496	6,822	6,808	6,674	6,681	6,745	6,324
MATHEMATICS	859	892	1,039	1,058	1,146	1,118	1,190	1,122	1,125	1,177	1,085
Applied Mathematics	158	185	193	213	188	206	211	230	242	265	252
Algebra	50	39	72	69	84	78	82	78	78	75	84
Analysis and Functional Analysis	103	90	132	105	105	107	99	100	103	130	87
Geometry	47	42	66	45	44	35	45	72	70	54	65
Logic	12	19	23	28	19	29	35	16	23	16	23
Number Theory	23	26	30	25	42	37	35	42	46	46	50
Mathematical Statistics	167	157	206	217	228	205	205	178	181	204	174
Topology	37	50	57	58	54	38	51	55	62	65	65
Computing Theory and Practice	12	12	19	12	18	16	14	18	14	18	14
Operations Research	22	29	16	22	37	26	36	21	20	17	21
Mathematics, General	177	191	180	209	276	269	305	233	155	163	117
Mathematics, Other	51	52	45	55	51	72	72	79	131	124	133
COMPUTER SCIENCE	612	705	800	869	880	903	997	921	910	925	850
Computer Science	519	612	720	791	825	833	913	837	829	819	735
Information Sciences and Systems	93	93	80	78	55	70	84	84	81	106	115
PHYSICS AND ASTRONOMY	1,274	1,393	1,411	1,537	1,544	1,692	1,652	1,676	1,599	1,586	1,431
Astronomy	49	52	50	55	76	66	89	84	71	91	60
Astrophysics	64	76	75	79	69	78	84	108	127	117	100
Acoustics	15	21	13	18	27	20	18	19	19	18	16
Chemical, and Atomic/Molecular	74	87	76	85	95	140	110	129	106	100	99
Electron	4	2	1	-	-	-	-	-	-	-	-
Elementary Particles	135	163	182	153	170	176	183	175	170	173	169
Fluids	14	17	14	17	19	12	18	21	24	26	23
Nuclear	81	73	66	86	82	90	91	87	106	92	76
Optics	78	76	85	94	96	104	98	129	123	104	97
Plasma and High-Temperature	61	42	58	65	62	79	46	48	39	55	49
Polymer	7	11	17	17	29	29	23	33	19	24	28
Solid State and Low-Temperature	296	306	372	408	336	388	371	364	328	313	308
Physics, General	269	323	247	297	340	343	355	323	255	191	205
Physics, Other	127	144	155	163	143	167	166	156	212	282	201
CHEMISTRY	1,970	2,100	2,194	2,214	2,137	2,257	2,162	2,148	2,147	2,219	2,134
Analytical	289	293	304	304	286	334	317	346	350	384	333
Inorganic	256	242	260	268	237	262	258	249	279	287	279
Nuclear	6	13	14	7	8	10	5	5	8	6	10
Organic	511	452	538	512	518	544	483	506	566	597	564
Medicinal/Pharmaceutical	64	48	83	69	99	102	96	96	105	115	132
Physical	310	325	364	397	336	334	338	300	334	279	310
Polymer	78	81	111	83	107	117	116	121	110	123	95
Theoretical	46	55	45	59	53	52	40	57	48	41	56
Chemistry, General	312	524	400	449	431	447	458	396	261	286	196
Chemistry, Other	98	67	75	65	62	55	51	72	86	101	159
EARTH, ATMOS., & MARINE SCI.	740	769	836	824	789	852	807	807	900	838	824
Atmospheric Physics and Chem.	15	18	20	36	13	27	27	22	45	38	43
Atmospheric Dynamics	16	20	21	23	23	27	16	21	25	24	16
Meteorology	27	20	31	28	34	32	25	35	28	25	22
Atmos. Sci./Meteorology, General	14	23	26	27	22	37	44	33	36	22	33
Atmos Sci./Meteorology, Other	15	2	10	6	7	6	18	14	15	16	10
Geology	165	166	192	166	197	194	186	162	165	171	158
Geochemistry	39	56	64	62	50	59	42	49	49	58	55
Geophysics and Seismology	87	91	117	108	101	106	93	101	108	106	100
Paleontology	17	21	24	25	21	17	20	14	23	23	15
Mineralogy, Petrology	36	26	36	29	9	21	19	23	19	14	14
Stratigraphy, Sedimentation	24	25	29	23	28	27	16	12	23	24	17
Geomorphology and Glacial Geology	10	14	18	12	16	13	11	11	26	20	18
Applied Geology	6	6	1	0	0	0	0	0	0	0	0
Geological & Related Sci., General	19	31	30	18	15	18	21	27	16	13	9
Geological & Related Sci., Other	28	28	33	31	17	24	22	22	17	40	35
Environmental Science	68	50	35	57	68	61	81	83	96	73	100
Hydrology and Water Resources	24	13	16	29	25	30	24	31	43	35	32
Oceanography	87	89	85	82	98	91	83	107	114	94	100
Marine Sciences	26	39	27	32	27	34	32	27	30	18	30
Misc. Physical Sciences, Other	17	31	21	30	18	28	27	13	22	24	17
ENGINEERING	4,543	4,894	5,214	5,438	5,698	5,822	6,008	6,305	6,114	5,930	5,337
Aerospace, Aeronautic. & Astronautic.	178	192	207	234	228	230	252	287	273	243	207
Agricultural	102	101	83	64	86	89	73	104	79	74	59
Bioengineering and Biomedical	115	129	149	147	171	173	189	220	210	207	245
Ceramic Sciences	35	43	58	42	42	39	39	41	39	24	33
Chemical	625	561	621	607	624	630	602	681	662	668	580
Civil	498	505	509	540	563	602	572	599	593	588	507
Communications	25	35	21	30	22	33	29	32	33	40	38
Computer	117	131	178	175	167	202	189	208	227	210	206
Electrical, Electronics	995	1,110	1,206	1,278	1,354	1,438	1,513	1,500	1,461	1,346	1,233
Engineering Mechanics	110	111	113	132	128	132	108	105	93	86	68
Engineering Physics	16	16	23	25	21	17	17	37	24	15	28
Engineering Science	27	37	42	51	55	46	56	52	45	50	51

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APPENDIX TABLE B-1 Number of doctorate recipients by subfield, 1989-1999

Subfield	Year of Doctorate										
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Environmental Health Engineering	40	48	66	54	61	82	84	98	63	63	78
Industrial/Manufacturing	162	151	165	196	236	228	284	258	246	230	209
Materials Science	257	307	361	365	416	433	476	470	482	482	394
Mechanical	650	773	762	855	902	883	917	947	928	937	785
Metallurgical	88	90	70	78	77	67	73	61	60	59	43
Mining and Mineral	33	39	38	26	24	23	19	31	33	21	18
Naval Architecture, Marine Eng.	9	8	5	-	-	-	-	-	-	-	-
Nuclear	86	114	107	120	108	85	105	113	102	97	77
Ocean	20	17	21	21	24	29	21	26	34	29	16
Operations Research	68	46	76	56	56	47	48	74	74	62	67
Petroleum	29	49	28	54	52	42	48	52	51	48	45
Polymer/Plastics	58	48	42	64	61	53	58	65	54	59	53
Systems	30	51	48	37	57	51	47	47	49	68	42
Engineering, General	61	75	78	64	47	39	60	60	51	30	39
Engineering, Other	109	107	137	103	116	129	129	137	148	194	216
LIFE SCIENCES	6,342	6,605	6,933	7,115	7,395	7,739	7,918	8,255	8,325	8,551	8,126
BIOLOGICAL SCIENCES	4,116	4,328	4,650	4,799	5,092	5,203	5,376	5,723	5,786	5,854	5,600
Biochemistry	669	678	765	715	846	804	824	794	831	798	763
Biomedical Sciences	-	-	-	-	-	-	93	140	158	184	177
Biophysics	87	103	100	125	103	123	155	142	147	166	173
Biotechnology Research	-	-	-	-	8	14	4	6	11	12	19
Bacteriology	11	15	11	13	14	18	13	16	13	13	13
Plant Genetics	18	31	23	33	41	30	35	41	30	40	31
Plant Pathology	22	37	50	32	41	40	32	38	33	18	36
Plant Physiology	47	51	65	68	48	70	55	73	47	61	54
Botany, Other	117	104	105	107	105	117	102	105	91	113	68
Anatomy	80	70	77	75	76	66	64	47	50	35	33
Biometrics and Biostatistics	46	47	59	63	74	72	67	81	84	75	76
Cell Biology	133	145	149	188	231	237	236	233	251	299	285
Ecology	161	166	189	180	177	201	203	245	255	293	272
Developmental Biology/Embryology	10	22	37	48	57	62	64	96	115	127	108
Endocrinology	21	24	33	27	16	26	20	24	17	30	19
Entomology	139	147	138	139	114	123	121	136	124	139	113
Biological Immunology	152	153	177	181	169	161	190	238	214	245	223
Molecular Biology	413	413	481	527	582	598	617	651	772	741	719
Microbiology	340	335	372	377	433	423	426	444	410	384	382
Neuroscience	181	192	238	238	276	284	309	404	437	413	437
Nutritional Sciences	128	118	106	132	134	147	136	142	124	139	104
Parasitology	20	13	20	17	17	22	14	22	17	15	13
Toxicology	111	91	86	105	100	120	126	138	180	156	115
Human and Animal Genetics	112	153	160	142	172	203	202	212	217	197	217
Human and Animal Pathology	105	101	122	114	130	128	109	135	106	91	120
Human and Animal Pharmacology	242	244	266	279	274	259	278	316	300	256	254
Human and Animal Physiology	272	278	272	266	271	289	262	275	227	258	243
Zoology, Other	132	122	125	134	114	117	145	100	97	111	126
Biological Sciences, General	231	333	278	315	305	288	348	291	209	217	182
Biological Sciences, Other	116	142	146	159	164	161	126	138	219	228	225
HEALTH SCIENCES	974	956	1,041	1,112	1,197	1,296	1,330	1,324	1,423	1,503	1,410
Speech-Lang. Pathology & Audiology	91	93	90	82	98	95	106	94	88	95	86
Environmental Health	35	38	38	44	38	51	51	58	67	54	69
Health Systems/Services Admin.	-	-	-	-	35	53	62	60	66	63	62
Public Health	129	123	132	157	153	142	152	156	139	157	171
Epidemiology	107	102	115	108	120	168	153	149	151	166	180
Exercise Physiology/Sci., Kinesiology	-	-	-	-	-	87	118	105	105	129	104
Nursing	308	261	325	338	373	336	354	354	420	399	358
Pharmacy	111	116	115	160	146	148	144	145	142	156	137
Rehabilitation/Therapeutic Services	-	-	17	25	36	43	20	26	34	35	26
Veterinary Medicine	48	70	56	63	61	56	55	65	47	49	49
Health Sciences, General	19	36	28	30	38	41	35	22	45	17	32
Health Sciences, Other	126	117	125	105	99	76	80	90	119	183	136
AGRICULTURAL SCIENCES	1,252	1,321	1,242	1,204	1,106	1,240	1,212	1,208	1,116	1,194	1,116
Agricultural Economics	164	145	168	141	137	162	173	169	133	155	149
Agricultural Business and Management	2	2	1	0	1	0	3	2	1	2	2
Animal Breeding & Genetics	23	22	18	23	18	17	19	12	24	18	21
Animal Nutrition	67	54	57	41	52	58	50	54	55	45	46
Dairy Science	16	20	19	14	11	11	14	9	14	10	12
Poultry Science	11	17	13	22	16	21	11	12	9	11	8
Fisheries Science & Management	34	42	39	26	38	48	49	46	45	30	38
Animal Sciences, Other	95	90	92	97	74	86	85	90	62	60	71
Agronomy & Crop Science	140	143	117	123	104	143	114	110	77	97	106
Plant Breeding & Genetics	64	87	69	82	68	81	72	63	67	69	44
Plant Pathology	63	64	90	63	58	55	52	90	65	66	66
Plant Protection-Pest Management	6	4	2	-	-	-	-	-	-	-	-
Plant Sciences, Other	15	23	17	29	28	24	30	21	20	37	38
Food Sciences	1	-	-	-	-	-	-	-	-	-	-
Food Distribution	0	0	0	0	0	1	-	-	-	-	-
Food Engineering	11	10	12	14	9	16	7	7	11	13	7
Food Sciences, Other	147	141	137	151	141	152	135	142	175	153	137
Soil Chemistry/Microbiology	28	27	24	24	26	21	27	29	32	27	29
Soil Sciences, Other	75	91	78	63	59	69	72	78	56	74	67
Horticulture Science	75	101	78	65	62	65	67	73	44	60	66
Forest Biology	22	27	17	29	18	20	24	19	22	20	14
Forest Engineering	1	2	2	2	3	0	4	0	13	2	1

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APPENDIX TABLE B-1. Number of doctorate recipients, by subfield, 1989-1999

Subfield	Year of Doctorate										
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Forest Management	21	14	22	16	17	17	20	22	21	27	17
Wood Sci. & Pulp/Paper Tech.	16	16	16	21	20	26	26	18	25	25	21
Conserv./Renewable Nat. Res.	12	16	19	9	13	21	24	13	17	25	25
Forestry & Related Sci., Other	57	62	45	62	55	59	71	56	50	69	49
Wildlife/Range Mgt.	52	58	59	55	54	52	50	64	50	56	44
Agricultural Sciences, General	7	5	3	9	10	4	6	5	10	8	8
Agricultural Sciences, Other	27	38	28	23	14	11	7	4	18	35	30
SOCIAL SCIENCES (INCL. PSYCH.)	5,961	6,093	6,152	6,216	6,545	6,613	6,635	6,814	7,055	7,086	7,036
Anthropology	325	324	341	320	342	384	375	396	434	425	461
Area Studies	17	22	24	33	36	34	27	28	10	14	11
Criminology	32	42	35	37	39	41	44	60	49	55	51
Demography/Population Studies	22	20	28	17	22	23	15	11	24	31	28
Economics	872	836	861	885	906	913	952	979	999	975	912
Econometrics	26	26	24	25	24	26	27	29	31	25	15
Geography	105	131	108	111	137	146	150	165	149	154	144
International Relations/Affairs	94	97	88	76	102	112	73	99	88	97	120
Political Science and Government	430	462	434	513	507	589	600	621	665	663	653
Public Policy Analysis	79	87	111	107	98	94	93	104	126	97	124
Sociology	436	428	465	495	513	525	540	516	577	550	543
Statistics	69	69	31	29	48	46	48	48	56	61	72
Urban Affairs/Studies	62	67	90	86	123	132	103	106	93	77	57
Social Sciences, General	26	23	36	33	32	21	35	26	26	30	25
Social Sciences, Other	158	178	226	186	196	148	124	135	157	147	153
PSYCHOLOGY	3,208	3,281	3,250	3,263	3,420	3,379	3,429	3,491	3,571	3,685	3,667
Clinical	1,259	1,337	1,305	1,309	1,373	1,285	1,291	1,325	1,268	1,350	1,449
Cognitive and Psycholinguistics	79	76	94	101	104	129	104	128	166	113	143
Comparative	8	8	7	2	5	8	4	3	6	6	11
Counseling	501	466	497	507	488	497	470	464	487	448	461
Developmental and Child	148	159	155	170	202	179	152	188	215	267	193
Human/Individual & Family Develop.	-	-	-	-	-	129	150	151	126	118	130
Experimental	146	143	142	154	143	139	151	128	145	149	137
Educational	105	98	110	91	91	69	74	92	61	61	66
Family and Marriage Counseling	-	-	-	-	-	-	57	52	64	51	55
Industrial and Organizational	104	126	142	138	159	137	155	162	187	189	158
Personality	28	20	13	17	22	19	16	24	26	25	16
Physiological/Psychobiology	62	46	45	55	85	93	92	80	77	92	87
Psychometrics	6	8	9	5	9	5	10	11	11	9	15
Quantitative	11	15	7	10	16	17	13	19	17	15	14
School	107	82	82	88	95	84	91	82	84	106	120
Social	128	145	147	139	125	153	155	170	181	186	175
Psychology, General	364	371	324	295	306	280	306	279	321	304	229
Psychology, Other	152	181	171	182	197	156	138	133	129	196	208
HUMANITIES	3,552	3,822	4,099	4,444	4,482	4,744	5,061	5,116	5,436	5,511	5,468
History, American	206	211	251	277	269	310	344	365	372	408	418
History, Asian	-	-	-	-	-	-	43	54	54	70	68
History, European	107	151	127	176	162	180	185	187	245	230	235
History/Philosophy of Sci. & Tech.	20	26	27	28	37	27	41	37	36	43	49
History, General	85	111	121	102	116	140	148	101	82	86	76
History, Other	120	113	137	141	142	144	128	123	176	152	165
Classics	51	58	55	58	61	84	62	72	53	85	77
Comparative Literature	103	97	150	163	153	163	191	164	181	163	166
Linguistics	188	167	227	266	214	221	201	230	244	220	250
Speech and Rhetorical Studies	35	38	86	98	111	142	139	155	138	169	150
Letters, General	13	19	17	18	18	22	43	28	23	22	19
Letters, Other	60	52	44	38	37	25	34	61	60	82	83
American Studies	76	72	92	81	101	88	94	115	84	100	98
Archeology	26	22	33	33	38	34	35	21	35	34	26
Art History/Criticism/Conservation	145	135	125	154	158	182	181	176	188	221	189
Music	521	572	587	641	613	685	713	699	727	694	769
Philosophy	270	243	285	279	274	302	298	369	447	410	387
Religion	215	219	187	231	257	252	248	317	303	327	337
Drama/Theater Arts	79	106	91	95	91	102	80	103	116	92	99
LANGUAGE AND LITERATURE	1,152	1,308	1,350	1,465	1,524	1,537	1,718	1,618	1,747	1,720	1,652
American	192	229	253	291	293	296	327	314	408	389	372
English	526	567	599	612	655	647	752	699	686	688	652
French	106	123	100	124	137	129	151	142	150	137	149
German	73	78	71	96	105	67	93	88	82	106	90
Italian	20	25	32	20	19	32	35	24	23	33	20
Spanish	134	173	173	179	179	212	209	186	250	207	201
Russian	13	19	25	28	28	38	28	37	39	43	26
Slavic	7	7	14	15	13	10	16	11	9	15	17
Chinese	9	16	19	20	21	25	20	29	23	19	27
Japanese	13	9	7	12	11	12	7	10	19	11	10
Hebrew	10	14	11	20	15	10	11	12	7	8	4
Arabic	6	7	4	12	10	4	8	6	4	9	12
Other Language and Literature	41	41	42	36	38	55	61	50	47	55	72
Humanities, General	19	28	29	21	30	32	25	39	25	23	24
Humanities, Other	61	74	78	79	76	72	110	92	100	160	131

APPENDIX TABLE B-1. Number of doctorate recipients, by subfield, 1989-1999

Subfield	Year of Doctorate										
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
EDUCATION	6,281	6,510	6,454	6,677	6,689	6,708	6,649	6,772	6,573	6,575	6,557
Curriculum and Instruction	841	839	807	900	856	819	896	896	916	885	996
Educational Admin. and Supervision	1,633	1,663	1,428	1,290	1,340	1,207	1,086	1,170	1,018	950	897
Educational Leadership	0	1	485	694	783	792	889	989	1,033	1,114	1,150
Educ./Instruct. Media Design	76	55	73	62	96	111	121	107	92	91	123
Educ. Stat./Research Methods	59	59	80	61	64	68	63	76	58	56	57
Educ.Assess., Test., & Meas.	42	40	32	45	23	28	19	32	30	35	39
Educational Psychology	301	323	323	346	290	311	297	309	360	328	298
School Psychology	85	87	90	88	86	97	71	114	116	112	109
Social/Phil. Found. of Educ.	110	86	109	101	109	140	130	125	138	129	125
Special Education	259	225	226	260	277	241	254	278	269	248	263
Counseling Educ./Couns. & Guidance	264	301	270	259	288	284	268	277	207	270	261
Higher Educ. / Evaluation & Research	373	424	344	381	357	428	457	481	505	432	464
Pre-elementary/Early Childhood	63	42	85	98	97	91	70	81	42	54	49
Elementary Education	99	110	73	73	65	71	61	46	56	62	59
Secondary Education	53	56	40	28	33	24	24	34	26	55	31
Adult and Continuing Education	236	211	210	208	233	215	235	210	164	172	153
TEACHING FIELDS	970	922	973	1,008	943	960	924	863	919	956	891
Agricultural Education	35	38	49	43	54	52	35	32	38	25	38
Art Education	39	44	28	46	38	33	39	41	30	46	47
Business Education	40	34	32	16	27	25	21	20	26	31	45
English Education	51	52	58	61	53	56	60	57	62	53	64
Foreign Languages Education	33	31	46	50	48	54	60	44	47	73	62
Health Education	100	95	78	98	83	97	99	90	58	70	58
Home Economics Education	19	10	21	12	14	11	15	13	13	8	10
Technical/Industrial Arts Education	17	17	13	11	16	20	15	11	19	30	21
Mathematics Education	69	65	73	62	69	74	92	100	93	115	101
Music Education	97	78	96	96	80	89	96	91	100	94	79
Nursing Education	29	24	18	29	19	24	18	23	22	14	22
Physical Education and Coaching	176	191	185	167	161	139	104	101	109	109	114
Reading Education	95	82	102	121	95	97	85	66	70	77	68
Science Education	48	72	72	73	73	85	73	96	77	109	58
Social Science Education	13	11	19	19	9	10	14	12	26	15	9
Speech Education	1	5	1	-	-	-	-	-	-	-	-
Technical Education	28	15	25	35	21	30	20	24	32	18	27
Trade and Industrial Education	47	18	17	11	24	24	13	12	16	14	14
Teacher Ed./Spec. Acad. & Voc., Other	33	40	40	58	59	40	65	30	81	55	54
Education, General	414	535	428	443	411	484	429	253	338	235	199
Education, Other	403	531	378	332	338	337	355	331	286	391	393
PROFESSIONAL/OTHER FIELDS	2,193	2,284	2,402	2,498	2,496	2,586	2,664	2,478	2,365	2,278	2,292
BUSINESS AND MANAGEMENT	1,067	1,036	1,163	1,248	1,281	1,283	1,327	1,276	1,242	1,172	1,104
Accounting	186	172	172	180	183	179	168	156	150	154	153
Banking/Financial Support Services	151	134	172	172	170	134	163	114	69	83	75
Business Admin. and Management	245	277	204	241	324	319	340	393	425	348	311
Business/Managerial Economics	27	21	19	21	33	40	37	38	48	57	42
International Business	-	-	-	-	-	22	23	36	39	33	34
Mgmt. Info. Sys./Business Data Proc.	-	-	72	103	102	117	111	94	100	86	83
Marketing Management and Research	130	120	134	139	166	167	153	153	153	143	127
Business Statistics	15	10	5	-	-	-	-	-	-	-	-
Operations Research	52	46	58	67	63	54	59	64	45	57	52
Organizational Behavior	95	64	72	81	73	102	100	108	121	103	100
Bus. Mgmt./Admin. Serv., General	57	70	123	112	87	87	92	67	28	36	50
Bus. Mgmt./Admin. Serv., Other	109	122	132	132	80	62	81	53	64	72	77
COMMUNICATIONS	306	323	332	330	321	371	380	389	332	373	379
Communications Research	85	87	72	45	33	40	40	60	51	52	50
Journalism	15	21	7	-	-	-	-	-	-	-	-
Mass Communications	-	-	68	85	117	156	121	137	117	142	153
Radio and Television	29	17	6	-	-	-	-	-	-	-	-
Communication Theory	-	-	25	47	41	45	53	37	40	48	47
Communications, General	79	86	70	76	69	68	77	81	74	62	69
Communications, Other	98	112	84	77	61	62	89	74	50	69	60
OTHER PROFESSIONAL FIELDS	766	858	836	880	867	891	931	774	772	724	781
Architectural Environmental Design	43	41	67	60	54	67	55	61	65	51	65
Home Economics	55	74	29	58	57	31	31	28	36	18	23
Law	26	34	23	20	29	33	37	26	27	31	37
Library Science	60	42	52	51	70	42	47	49	40	34	39
Parks/Recreation/Leisure/Fitness	-	-	-	-	44	37	54	29	24	38	29
Public Administration	97	88	107	108	117	135	128	104	95	105	119
Social Work	206	246	240	248	237	272	303	256	247	236	229
Theology/Religious Education	232	271	273	292	243	262	273	213	178	160	168
Professional Fields, General	0	3	3	1	1	1	1	2	4	0	9
Professional Fields, Other	47	59	42	42	15	11	2	6	56	51	63
OTHER/UNKNOWN	54	67	71	40	27	41	26	39	25	16	28

#Includes mathematics and computer sciences. *Total includes 17 respondents with missing data for doctoral field. **Includes 20 respondents with missing data for doctoral field. ***Total includes 28 respondents with missing data for doctoral field.
NOTE: Dash (-) indicates that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE B-2a. Number of doctorate recipients, by gender, race/ethnicity, and citizenship, 1979,1984, 1989-1999 (Total all doctorates)

	Year of Doctorate												
	1979	1984	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL MEN AND WOMEN*	31,239	31,337	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555	42,683	41,140
U.S. Citizen	25,474	24,046	23,402	24,905	25,573	26,010	26,449	27,147	27,740	27,751	28,154	28,462	27,622
Permanent Visa	1,320	1,224	1,626	1,698	1,857	1,980	2,259	3,747	4,318	3,767	2,930	2,704	2,300
Temporary Visa	3,587	4,832	6,648	8,093	9,311	9,953	9,932	9,406	8,811	9,614	9,180	9,498	9,068
Unknown Citizenship	858	1,235	2,651	1,371	793	947	1,161	734	874	1,282	2,291	2,019	2,150
Total Known Race/Ethnicity	28,719	29,308	30,962	33,883	35,783	37,200	38,291	39,840	40,328	40,658	38,881	39,393	38,614
U.S. Citizen	23,961	23,457	23,026	24,531	25,087	25,658	26,217	26,894	27,433	27,403	27,056	27,537	27,177
Permanent Visa	1,285	1,197	1,564	1,637	1,796	1,906	2,225	3,699	4,274	3,734	2,867	2,616	2,260
Temporary Visa	3,397	4,515	6,297	7,558	8,789	9,536	9,675	9,115	8,546	9,371	8,838	9,091	8,808
Unknown Citizenship	76	139	75	157	111	100	174	132	75	150	120	149	369
American Indian†	84	74	94	98	132	152	121	146	148	190	166	190	219
U.S. Citizen	81	74	94	97	130	149	120	143	148	187	166	189	219
Permanent Visa#	0	0	0	0	2	0	0	0	0	1	0	0	0
Temporary Visa#	3	0	0	1	0	2	1	3	0	2	0	0	0
Unknown Citizenship	0	0	0	0	0	1	0	0	0	0	0	1	0
Asian‡	2,602	3,403	5,195	6,293	7,528	8,291	8,674	9,369	9,709	9,830	9,011	8,592	8,032
U.S. Citizen	428	513	633	641	789	848	891	950	1,141	1,090	1,310	1,174	1,324
Permanent Visa	674	510	635	665	742	916	1,126	2,596	3,168	2,609	1,812	1,555	1,194
Temporary Visa	1,463	2,300	3,907	4,931	5,949	6,506	6,604	5,800	5,379	6,097	5,857	5,833	5,479
Unknown Citizenship	37	80	20	56	48	21	53	23	21	34	32	30	35
Black	1,443	1,496	1,247	1,354	1,466	1,434	1,615	1,683	1,823	1,836	1,774	1,914	2,071
U.S. Citizen	1,058	956	822	901	1,010	971	1,111	1,101	1,307	1,313	1,349	1,483	1,596
Permanent Visa	58	102	141	149	156	145	169	178	168	143	139	120	133
Temporary Visa	320	420	273	291	293	311	322	389	337	364	276	299	288
Unknown Citizenship	7	18	11	13	7	7	13	15	11	16	10	12	54
Hispanic	908	916	1,063	1,228	1,320	1,402	1,431	1,534	1,534	1,621	1,685	1,869	1,842
U.S. Citizen	470	534	582	721	732	778	834	884	912	947	1,053	1,197	1,109
Permanent Visa	77	71	112	116	136	131	139	146	142	156	136	122	137
Temporary Visa	348	300	363	386	446	482	454	502	472	512	483	541	561
Unknown Citizenship	13	11	6	5	6	11	4	2	8	6	13	9	35
White	23,682	23,419	23,363	24,910	25,337	25,921	26,450	27,108	27,114	27,181	26,245	26,828	26,450
U.S. Citizen	21,924	21,380	20,895	22,171	22,426	22,912	23,261	23,816	23,925	23,866	23,178	23,494	22,929
Permanent Visa	476	514	676	707	760	714	791	779	796	825	780	819	796
Temporary Visa	1,263	1,495	1,754	1,949	2,101	2,235	2,294	2,421	2,358	2,396	2,222	2,418	2,480
Unknown Citizenship	19	30	38	83	50	60	104	92	35	94	65	97	245
Unknown Race/Ethnicity	2,520	2,029	3,365	2,184	1,751	1,690	1,510	1,194	1,415	1,756	3,674	3,290	2,526
U.S. Citizen	1,513	589	376	374	486	352	232	253	307	348	1,098	925	445
Permanent Visa	35	27	62	61	61	74	34	48	44	33	63	88	40
Temporary Visa	190	317	351	535	522	417	257	291	265	243	342	407	260
Unknown Citizenship	782	1,096	2,576	1,214	682	847	987	602	799	1,132	2,171	1,870	1,781

*Total includes individuals who did not report sex.
†Includes Alaskan Native.
#In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.
‡Includes Pacific Islander.

Source: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX TABLE B-2b. Doctorates: MEN

	Year of Doctorate												
	1979	1984	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL MEN	22,302	20,638	21,814	22,960	23,525	24,235	24,384	25,059	25,159	25,274	24,944	24,659	23,460
U.S. Citizen	17,585	14,741	13,396	14,165	14,385	14,518	14,512	14,732	14,964	14,708	15,045	14,880	14,383
Permanent Visa	1,014	892	1,139	1,189	1,223	1,290	1,468	2,636	2,908	2,485	1,834	1,666	1,375
Temporary Visa	3,092	4,134	5,444	6,632	7,506	7,946	7,835	7,306	6,842	7,389	6,962	7,010	6,636
Unknown Citizenship	611	871	1,835	974	411	481	569	385	445	692	1,103	1,103	1,066
Total Known Race/Ethnicity	20,456	19,150	19,411	21,342	22,356	23,168	23,534	24,324	24,297	24,248	22,998	22,735	22,051
U.S. Citizen	16,494	14,320	13,117	13,899	14,032	14,262	14,343	14,564	14,749	14,477	14,430	14,334	14,098
Permanent Visa	987	870	1,094	1,149	1,177	1,236	1,444	2,602	2,882	2,463	1,795	1,606	1,347
Temporary Visa	2,922	3,850	5,143	6,175	7,073	7,606	7,641	7,093	6,630	7,208	6,705	6,717	6,450
Unknown Citizenship	53	110	57	119	74	64	106	65	36	100	68	78	156
American Indian†	59	54	49	52	74	82	61	74	80	104	78	104	98
U.S. Citizen	56	54	49	52	74	82	60	71	80	103	78	104	98
Permanent Visa#	0	0	0	0	0	0	0	0	0	0	0	0	0
Temporary Visa#	3	0	0	0	0	0	1	3	0	1	0	0	0
Unknown Citizenship	0	0	0	0	0	0	0	0	0	0	0	0	0
Asian‡	2,158	2,789	4,166	5,030	5,872	6,418	6,605	7,061	7,103	7,209	6,423	6,040	5,543
U.S. Citizen	311	339	446	427	482	531	552	590	667	615	748	648	772
Permanent Visa	564	392	459	481	489	604	732	1,877	2,198	1,787	1,142	987	711
Temporary Visa	1,253	1,987	3,245	4,077	4,865	5,265	5,282	4,576	4,223	4,782	4,514	4,389	4,036
Unknown Citizenship	30	71	16	45	36	18	39	18	15	25	19	16	24
Black	898	904	685	733	788	771	840	889	881	933	863	824	919
U.S. Citizen	552	429	328	351	421	396	441	411	490	534	533	526	604
Permanent Visa	52	81	125	128	131	123	138	142	125	107	108	87	92
Temporary Visa	288	383	222	243	232	246	251	329	261	286	213	204	209
Unknown Citizenship	6	11	10	11	4	6	10	7	5	6	9	7	14
Hispanic	681	620	662	760	807	860	874	866	909	927	978	1,055	968
U.S. Citizen	311	313	307	380	371	410	423	438	458	473	540	607	486
Permanent Visa	52	47	69	69	88	72	94	80	79	87	82	71	67
Temporary Visa	310	252	283	309	344	371	356	346	369	363	349	374	405
Unknown Citizenship	8	8	3	2	4	7	1	2	3	4	7	3	10
White	16,660	14,783	13,849	14,767	14,815	15,037	15,154	15,434	15,324	15,075	14,656	14,712	14,523
U.S. Citizen	15,264	13,185	11,987	12,689	12,684	12,843	12,867	13,054	13,054	12,752	12,531	12,449	12,138
Permanent Visa	319	150	441	471	469	437	480	503	480	482	463	461	477
Temporary Visa	1,068	1,228	1,393	1,546	1,632	1,724	1,751	1,839	1,777	1,776	1,629	1,750	1,800
Unknown Citizenship	9	20	28	61	30	33	56	38	13	65	33	52	108
Unknown Race/Ethnicity	1,846	1,488	2,403	1,618	1,169	1,067	850	735	862	1,026	1,946	1,924	1,409
U.S. Citizen	1,091	421	279	266	353	256	169	168	215	231	615	546	285
Permanent Visa	27	22	45	40	46	54	24	34	26	22	39	60	28
Temporary Visa	170	284	301	457	433	340	194	213	212	181	257	293	186
Unknown Citizenship	558	761	1,778	855	337	417	463	320	409	592	1,035	1,025	910

†Includes Alaskan Native.
#In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.
‡Includes Pacific Islander.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates.

APPENDIX TABLE B-2c. Doctorates: WOMEN

	Year of Doctorate												
	1979	1984	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TOTAL WOMEN	8,937	10,699	12,513	13,106	13,873	14,436	15,122	15,820	16,414	16,944	17,251	17,858	17,493
U.S. Citizen	7,889	9,305	10,006	10,740	11,185	11,491	11,932	12,412	12,774	13,043	13,075	13,568	13,239
Permanent Visa	306	332	487	508	633	687	788	1,110	1,409	1,282	1,095	1,022	925
Temporary Visa	495	698	1,204	1,461	1,794	1,990	2,069	2,077	1,952	2,214	2,203	2,468	2,428
Unknown Citizenship	247	364	816	397	261	268	333	221	279	405	878	800	901
Total Known Race/Ethnicity	8,263	10,158	11,551	12,540	13,417	14,019	14,738	15,501	16,023	16,405	15,870	16,633	16,562
U.S. Citizen	7,467	9,137	9,909	10,632	11,053	11,396	11,872	12,327	12,684	12,926	12,623	13,200	13,079
Permanent Visa	298	327	470	487	619	669	779	1,096	1,391	1,271	1,071	1,002	913
Temporary Visa	475	665	1,154	1,383	1,708	1,920	2,021	2,014	1,910	2,159	2,124	2,361	2,357
Unknown Citizenship	23	29	18	38	37	34	66	64	38	49	52	70	213
American Indian†	25	20	45	46	58	70	60	72	68	86	88	86	121
U.S. Citizen	25	20	45	45	56	67	60	72	68	84	88	85	121
Permanent Visa#	0	0	0	0	2	0	0	0	0	1	0	0	0
Temporary Visa#	0	0	0	1	0	2	0	0	0	1	0	0	0
Unknown Citizenship	0	0	0	0	0	1	0	0	0	0	0	1	0
Asian‡	444	614	1,029	1,262	1,648	1,862	2,055	2,298	2,599	2,616	2,581	2,536	2,488
U.S. Citizen	117	174	187	214	306	317	338	359	474	475	561	525	552
Permanent Visa	110	118	176	183	253	311	392	718	969	822	670	561	483
Temporary Visa	210	313	662	854	1,077	1,231	1,312	1,218	1,150	1,311	1,337	1,437	1,442
Unknown Citizenship	7	9	4	11	12	3	13	3	6	8	13	13	11
Black	545	592	562	621	678	663	773	792	942	903	911	1,088	1,152
U.S. Citizen	506	527	494	550	589	575	670	690	817	779	816	957	992
Permanent Visa	6	21	16	21	25	22	31	36	43	36	31	32	41
Temporary Visa	32	37	51	48	61	65	70	59	76	78	63	94	79
Unknown Citizenship	1	7	1	2	3	1	2	7	6	10	1	5	40
Hispanic	227	296	401	468	513	542	556	668	625	694	707	812	874
U.S. Citizen	159	221	275	341	361	368	411	446	454	474	513	589	623
Permanent Visa	25	24	43	47	48	59	45	66	63	69	54	51	70
Temporary Visa	38	48	80	77	102	111	97	156	103	149	134	166	156
Unknown Citizenship	5	3	3	3	2	4	3	0	5	2	6	6	25
White	7,022	8,636	9,514	10,143	10,520	10,882	11,294	11,671	11,789	12,106	11,583	12,111	11,927
U.S. Citizen	6,660	8,195	8,908	9,482	9,741	10,069	10,393	10,760	10,871	11,114	10,645	11,044	10,791
Permanent Visa	157	164	235	236	291	277	311	276	316	343	316	358	319
Temporary Visa	195	267	361	403	468	511	542	581	581	620	590	664	680
Unknown Citizenship	10	10	10	22	20	25	48	54	21	29	32	45	137
Unknown Race/Ethnicity	674	541	962	566	456	417	384	319	391	539	1,381	1,225	931
U.S. Citizen	422	168	97	108	132	95	60	85	90	117	452	368	160
Permanent Visa	8	5	17	21	14	18	9	14	18	11	24	20	12
Temporary Visa	20	33	50	78	86	70	48	63	42	55	79	107	71
Unknown Citizenship	224	335	798	359	224	234	267	157	241	356	826	730	688

†Includes Alaskan Native
#In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country
‡Includes Pacific Islander

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, Survey of Earned Doctorates

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APPENDIX C: Technical Notes

I. Survey Response Rates

Survey Response Rates*

Year	Self-Report Rate	Year	Self-Report Rate
1967	97.3	1984	95.1
1968	97.6	1985	94.8
1969	96.6	1986	93.5
1970	98.1	1987	93.1
1971	97.5	1988	92.9
1972	97.3	1989	92.3
1973	97.5	1990	93.6
1974	94.2	1991	94.6
1975	97.3	1992	95.1
1976	97.2	1993	94.7
1977	96.6	1994	94.6
1978	96.3	1995	94.1
1979	96.4	1996	92.9
1980	96.2	1997	91.5
1981	95.7	1998	91.8
1982	95.3	1999	91.7
1983	95.5		

* The rates for 1967-98 reflect late responses. The rate for 1999 may increase slightly in the next year if additional questionnaires are received after survey closure. Self-report rates for 1980-99 are determined from the "source of response" indicator in the doctorate records. Because this indicator was not coded prior to 1980, survey forms for 1965-79 are assumed to be self-reported if "month signed" or "marital status" is present. "Marital status" is not available from sources other than the doctorate recipient.

As shown in the table above, 91.7 percent of 1999 U.S. research doctorate recipients completed survey forms. This percentage is what has been referred to as the "self-report" rate. For the remaining doctorate recipients, "skeleton" records were created using basic information obtained from doctorate-granting institutions or from commencement programs. This skeleton information includes Ph.D. institution, Ph.D. field, Ph.D. year, and sex of Ph.D. recipient. It should be noted that the sex variable was not always available, even for survey respondents. Every effort was made to obtain this information for as many respondents as possible, but for a small percentage, this could not be done with confidence. Thus, you will notice that there are missing data for many of the tabulations involving sex in this year's report. Prior to 1997, whenever sex was missing, the data were assigned to "male." In 1997, it was decided to

discontinue this practice. The tabulations involving sex for 1997 through 1999 exclude missing cases except where noted otherwise.

Wherever possible this report includes data from all Ph.D. records whether complete or skeletal; thus the reported total number of Ph.D. recipients for 1999 (41,140) includes both respondents and non-respondents. It should also be noted that, in keeping with the practice of earlier data collection cycles, counts for previous years were corrected by the addition of data from surveys received after the close of data collection for a given year.

II. Item Response Rates

The table on the following pages shows the response rates for each item in the Survey of Earned Doctorates for 1989 through 1999. The numbers and percentages shown in the tables and figures in the body of the summary report are based only on the number of research doctorate recipients who responded to the applicable survey items. For cross-tabulations, the response rate for a given tabulation will be no greater than the lowest response rate for the items involved in the tabulation.

For additional technical information on the Survey of Earned Doctorates, please contact

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National Opinion Research Center at the University of Chicago
1155 East 60th Street
Chicago, IL 60637

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II. ITEM RESPONSE RATES, 1989-1999

Variable Name	Field	1989	1990	1991	1
PHDFICE	Ph.D. FICE Code	100.0	100.0	100.0	1
RACE[a]	Race/Ethnic Group (Recoded)	90.2	93.9	95.3	9
PHDENTRY	First Grad. Year in Ph.D. Instn	NA	NA	NA	N
SRCE1ED[b]	Primary Source of Support (Edited)	82.5	78.1	77.6	6
PDWK1ED[c]	Primary Work Activity (Edited)	61.4	56.2	55.9	5
		(92.4)	(83.8)	(83.8)	(
PDWK2ED[c]	Secondary Work Activity (Edited)	39.2	39.5	39.5	3
		(58.9)	(58.9)	(59.3)	(
EDFATHER	Father's Education	88.3	90.8	92.3	9
EDMOTHER	Mother's Education	87.5	90.5	92.2	9
BIRTHYR	Year of Birth	92.4	96.6	98.2	9
BIRTHPL	Place of Birth	91.8	92.1	94.1	9
SEX	Sex	100.0	100.0	99.6	9
MARITAL	Marital Status	91.0	91.7	91.5	9
DEPENDS	Number of Dependents	85.8	90.0	89.5	8
CITIZ	Citizenship	92.3	96.2	97.9	9
CNTRYCIT[c]	Country of Citizenship	21.7	26.4	29.2	3
		(90.1)	(97.2)	(98.0)	(

NOTE: NA = not available

[a] The percentage represents the race/ethnic groups standardly reported by the Doctorate Da

[b] As of FY 1996, the percentage includes recipients who said they had no primary source of

[c] The percentages on the first line are based on the total doctoral cohort for a fiscal year. Th
based on the number of non-U.S. citizens in that year.

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992	1993	1994	1995	1996	1997	1998 (Prelim)	1998 (Adjusted)	1999 (Prelim)
00.0	100.0	100.0	100.0	100.0	NA	NA	NA	NA
5.6	96.2	97.6	97.1	96.4	93.0	93.3	93.6	94.8
IA	86.9	86.7	86.5	85.5	79.0	83.3	83.6	85.7
9.7	66.2	72.4	74.9	87.9	87.8	88.1	88.5	89.8
5.7	54.7	56.3	56.6	60.8	60.3	60.8	61.1	60.0
83.5)	(83.3)	(86.1)	(86.8)	(93.3)	(92.8)	(93.0)	(93.0)	(94.9)
7.4	36.7	38.2	38.4	48.5	51.7	52.0	52.2	49.8
56.0)	(55.8)	(58.4)	(58.8)	(74.4)	(79.6)	(79.7)	(79.7)	(78.8)
3.1	92.7	92.7	92.3	91.4	89.4	89.4	89.8	90.3
3.0	92.6	92.5	92.1	91.6	89.6	89.6	89.9	90.5
7.7	97.3	98.2	97.5	96.8	92.8	92.5	92.7	94.9
5.1	94.9	94.9	94.5	93.0	90.5	90.5	90.8	91.0
9.4	99.2	99.6	99.6	99.5	99.2	99.6	99.6	99.5
2.0	91.6	91.5	91.0	91.7	89.2	89.9	90.2	90.6
9.8	89.8	89.7	89.4	89.5	88.2	88.4	88.7	88.9
7.6	97.1	98.2	97.9	97.0	94.6	92.7	95.3	94.8
0.3	30.2	31.8	31.3	31.3	26.5	26.3	26.9	26.6
98.5)	(98.6)	(99.3)	(99.4)	(98.5)	(95.6)	(92.9)	(94.2)	(96.1)

ta Project, multiple and "other" races are excluded

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e percentages on the second line (enclosed in parentheses) are

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Variable Name	Field	1989	1990	1991	1992
RACERAW*	Race/Ethnic Group	90.2	93.9	95.3	95.6
HANDICAP†	Handicap Indic. (incl. "No" from 1989-present)	91.0	92.4	93.4	93.9
HSPLACE	Place of High School	89.8	90.8	93.5	94.
HSYEAR	Year of H.S. Graduation	88.5	90.5	90.9	92.
JRCOLL	Jr. Coll. Indic. (incl. "No")	89.1	90.8	92.0	92.
REGNURSE‡	Registered Nurse	0.2	0.2	0.2	0.1
CEPLACE	Place of College Entrance	90.3	90.8	91.8	92
CEYEAR	Year of College Entrance	89.3	90.1	91.3	92
BAINST	Baccalaureate Institution	94.4	95.7	96.5	96
BAFIELD	Field of Baccalaureate	90.3	91.0	92.3	92
BAYEAR	Year of Baccalaureate	93.2	95.0	95.5	96
BANONE‡	No Baccalaureate/Master's	0.6	1.1	1.1	0.
GEYEAR	Year of Graduate Entrance	88.2	86.6	89.4	89
MAINST	Master's Institution	77.5	78.2	78.4	79
MAFIELD	Field of Master's	74.6	75.5	76.3	7
MAYEAR	Year of Master's	75.9	76.7	77.1	7

NOTE: NA = not available

* The percentage represents the race/ethnic groups standardly reported by the Doctorate Da

† The percentages from 1985-1988 represent the numbers of Ph.D.s with handicaps. Begin handicap. Note: The definition of "handicapped" was much more restrictive in 1990 and 19

‡ Because this field is not applicable to all doctorate recipients, the response rate will always

‡ Because this field is not applicable to all doctorate recipients, the response rate will always only "no baccalaureate" from 1983 to 1992. Beginning in 1993, it indicates that the Ph.D. h

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2	1993	1994	1995	1996	1997	1998 (Prelim)	1998 (Adjusted)	1999 (Prelim)
6	96.2	97.7	97.2	96.5	93.0	93.3	93.6	94.8
9	93.6	93.7	93.3	91.8	90.0	97.9	90.0	90.2
5	94.0	93.9	93.5	92.2	90.1	90.5	90.8	91.2
1	92.1	91.7	91.6	90.5	89.0	93.8	94.0	90.3
7	92.9	92.5	92.4	90.6	91.4	99.9	91.8	91.6
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
7	92.8	92.3	92.1	90.6	82.5	90.1	90.4	90.4
2	91.7	91.5	91.3	89.1	82.6	88.4	88.7	88.9
4	96.3	96.6	95.8	94.9	89.0	90.4	90.6	91.8
4	91.9	91.6	90.9	89.3	82.7	83.9	84.2	84.3
0	95.7	96.2	95.5	94.7	88.1	89.9	90.1	91.6
9	8.6[d]	9.1[d]	9.7[d]	11.4[d]	6.9[d]	8.1[d]	8.1[d]	8.0[d]
9.5	88.6	88.2	87.4	85.7	77.3	81.1	81.3	84.6
9.0	78.6	78.9	78.0	77.2	72.5	72.8	73.0	72.9
7.0	76.1	76.1	75.3	74.6	68.7	70.1	70.4	70.6
7.7	77.0	77.1	76.3	75.5	71.2	72.5	72.7	71.8

ata Project; multiple and "other" races are excluded.

ning in 1989, the response rates include Ph.D.s who reported "no"

991.

s be under 100%.

s be under 100%. Note: "No Baccalaureate/Master's" represents

eld no baccalaureate and/or master's degree.

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Variable Name	Field	1989	1990	1991	19
PROFDEG[a]	Type Professional Doctorate	1.3	1.3	1.6	1.6
PROFYEAR[a]	Year Professional Doctorate	1.3	1.3	1.6	1.5
PHDINST	Doctorate Institution	100.0	100.0	100.0	10
PHDFIELD	Field of Doctorate	100.0	100.0	100.0	10
PHDCY	Calendar Year of Doctorate	100.0	100.0	100.0	10
PHDMONTH	Month of Doctorate	100.0	100.0	100.0	10
PHDFY	Fiscal Year of Doctorate	100.0	100.0	100.0	10
PHDTYPE1	Type of Doctorate	100.0	100.0	100.0	10
PHDTYPE2[a]	Applied Research Doctorate	2.8	2.6	2.3	2.4
TOCEBA[a]	Time Out CE-BA	88.0	88.5	89.7	90
TOBAGE[a]	Time Out BA-GE	88.3	86.6	89.5	89
TOGEMA[a]	Time Out GE-MA	71.7	72.2	73.3	74
TOMAPHD[a]	Time Out MA-Ph.D.	70.1	65.2	69.9	71
TOGEPHD	Time Out GE-Ph.D.	84.7	77.4	84.0	84
TICEPHD	Time In CE-Ph.D.	84.1	76.7	83.4	84
YEARSFT	Full-time enrollment	69.3	83.1	73.9	75
YEARSPT	Part-time enrollment	69.3	NA	NA	NA
YEARSOUT	Not enrolled	69.3	NA	NA	NA
PHDDISS[b]	Field of Dissertation	89.8	NA	NA	65
SRCEPRIM[c]	Primary Source of Support	71.7	75.8	77.7	69
DEBTIND	Debt Indicator (incl. "No")	90.9	92.2	93.1	93
PRESTAT	Predoctoral Status	90.7	92.4	93.5	93
PDOCSTAT	Postdoctoral Status	89.6	90.7	91.6	92
PDOCPLAN	Postdoctoral Plans	89.4	91.3	92.1	92

NOTE: NA = not available.

[a] Because this field is not applicable to all doctorate recipients, the response rate will always b

[b] The percentage was low in 1992 because 28% of the Ph.D.s completed earlier survey forms

[c] As of FY 1996, the percentage included recipients who said they had no primary source of s

92	1993	1994	1995	1996	1997	1998 (Prelim)	1998 (Adjusted)	1999 (Prelim)
6	1.6	1.7	1.8	1.9	1.9	1.2	1.2	2.0
5	1.6	1.7	1.8	1.9	1.8	2.8	2.8	2.8
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
4	2.4	2.7	2.5	2.2	1.0	1.0	1.0	1.4
5	89.7	89.7	88.9	86.8	82.7	82.6	82.9	83.8
6	88.6	88.2	87.4	85.7	77.3	81.1	81.3	84.6
0	73.1	73.1	72.0	70.5	61.7	63.6	63.9	66.2
1	69.9	70.0	69.0	68.2	68.0	65.1	65.3	66.2
5	83.1	82.5	81.8	80.2	75.9	74.9	74.9	79.4
3	83.0	82.9	82.4	80.9	75.7	78.0	78.3	79.6
7	75.7	75.2	74.5	77.1	82.6	89.4	89.7	90.2
A	NA	NA	NA	NA	NA	NA	NA	NA
A	NA	NA	NA	NA	NA	NA	NA	NA
0[c]	92.7	93.3	92.4	92.1	89.1	89.8	90.1	90.8
7	66.1	72.4	74.9	87.9[c]	87.8	88.2	88.6	89.8
3	92.8	92.8	92.4	91.1	NA	NA	NA	NA
5	93.1	93.0	92.6	91.8	88.2	89.7	90.0	90.6
1	91.8	91.7	91.0	91.0	88.9	89.3	89.6	90.3
5	92.4	92.4	91.9	91.2	87.0	87.6	87.9	89.1

be under 100%

s that did not request field of dissertation

upport

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Variable Name	Field	1989	1990	1991	19
PDREASON	Reason for Postdoctoral Appointment	NA	NA	NA	NA
PDSTDFLD[a]	Postdoctoral Study Field	21.9	23.2	24.4	24
		(94.7)	(95.2)	(95.1)	(9
PDSTDSUP[a]	Sources of Study Support	21.6	22.4	24.0	24
		(93.6)	(91.8)	(93.4)	(9
PDEMPLOY[b]	Type of Employer	63.9	63.6	63.3	62
		(96.1)	(94.9)	(94.9)	(9
PDWKPRIM[b]	Primary Work Activity	61.4	56.2	55.9	55
		(92.4)	(83.8)	(83.8)	(8
PDWKSEC[b]	Secondary Work Activity	39.2	39.5	39.5	37
		(58.9)	(58.9)	(59.3)	(5
PDEMPFLD[b]	Field of Employment	47.9	47.0	47.3	45
		(72.1)	(70.2)	(70.8)	(6
PDCONSID	Postdoctoral Appointment Consideration	NA	NA	NA	NA
PDDECISN	Decision Against Postdoc	NA	NA	NA	NA
PDUSFOR	Postdoctoral Location US or Foreign	NA	NA	NA	NA

NOTE: NA = not available

[a] The percentages on the first line are based on the total doctoral cohort for a fiscal year. The
the number of recipients who reported plans for postdoctoral study.

[b] The percentages on the first line are based on the total doctoral cohort for a fiscal year. The
the number of recipients who reported plans for postdoctoral employment.

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92	1993	1994	1995	1996	1997	1998 (Prelim)	1998 (Adjusted)	1999 (Prelim)
A	NA	NA	NA	NA	NA	NA	NA	NA
.3	25.1	25.3	25.0	25.4	25.6	25.4	25.4	25.4
3.4)	(94.0)	(93.8)	(93.9)	(97.4)	(99.0)	(96.0)	(96.0)	(96.9)
.2	24.7	25.1	24.6	24.7	25.0	25.2	25.2	25.2
2.9)	(92.4)	(93.1)	(92.5)	(94.9)	(100.0)	(95.8)	(95.8)	(96.5)
.9	61.4	61.1	60.9	61.4	60.2	61.7	61.9	60.3
4.3)	(93.5)	(93.5)	(93.4)	(94.2)	(92.7)	(94.4)	(94.4)	(95.5)
.7	54.7	56.3	56.6	60.8	60.4	61.0	61.2	60.0
3.5)	(83.3)	(86.1)	(86.8)	(93.3)	(93.0)	(93.2)	(93.2)	(94.9)
.4	36.7	38.2	38.4	48.5	49.7	51.1	50.2	49.8
6.0)	(55.9)	(58.4)	(58.8)	(74.4)	(76.4)	(76.7)	(76.7)	(78.8)
.3	44.0	45.4	45.7	58.4	59.5	60.0	60.3	60.1
8.0)	(67.0)	(69.4)	(70.1)	(89.6)	(91.5)	(91.9)	(91.9)	(95.1)
A	NA	NA	NA	NA	NA	NA	NA	NA
A	NA	NA	NA	NA	NA	NA	NA	NA
A	NA	94.6	94.2	92.7	91.4	90.1	90.3	91.9

percentages on the second line (enclosed in parentheses) are based on

percentages on the second line (enclosed in parentheses) are based on

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III. Derived Variables

The following derived variables deserve further explanation.

Postdoctoral Plans to Stay in the United States

Starting in 1997, the planned postdoctoral location of doctorate recipients was coded in a new variable called PDLOC using FIPS codes for U.S. states and territories and countries. Values of PDLOC less than 100 indicate a postdoctoral location in the United States.

Also beginning in 1997, a dichotomous variable, PDUSFOR, was created to index whether the planned postdoctoral location reported by the respondent was in the United States or in a foreign location.

For years prior to 1997, this variable is based on PDAFFIL. The first character of PDAFFIL flags whether the respondent's planned postdoctoral location is in the United States; a numeric character in this position indicates a United States location. Non-numeric values in the first position of PDAFFIL (except "R") indicate non-U.S. locations. A value of "R" for PDAFFIL signifies the respondent's refusal to provide information.

For the interested user, the following SAS code produces "USPLAN" as an index of plans to stay in the United States following the doctorate using PDAFFIL1 (a variable created using the first character of PDAFFIL).

```
USPLAN=2;  /* Outside the U.S. */
if PDAFFIL1 in ("0","1","2","3","4","5","6","7","8","9")
   then USPLAN=1; /* U.S. */
if PDAFFIL1 eq "R" then USPLAN=.;
if PDAFFIL1 eq " " then USPLAN=.;
```

Firm Postdoctoral Plans

Postdoctoral plans are coded using the values of PDOCSTAT, which indicate that the doctorate recipient's postdoctoral plans were definite at the time the survey was completed. That is, codes 0, 1, or A on PDOCSTAT indicate that the respondent had definite postdoctoral plans.

whereas codes 2, 3, and 4 indicate that the respondent was still seeking to determine postdoctoral placement.

The following is the SAS code used to derive FIRMPLAN from PDOCSTAT :

```
if PDOCSTAT in ("0","1","A") then FIRMPLAN=1;   /* Definite */
if PDOCSTAT in ("2","3","4") FIRMPLAN=2;   /* Seeking */
if PDOCSTAT eq " " then FIRMPLAN=.;
```

Firm Plans to Stay in the United States

This variable is derived from USPLAN and FIRMPLAN. A respondent is coded as having firm plans to stay in the United States if the reported postdoctoral location was in the United States and the reported postdoctoral plans were coded "definite."

The following is the SAS code that creates the variable FIRMUS from USPLAN and FIRMPLAN as described above.

```
FIRMUS=2;
if (USPLAN eq 1 and FIRMPLAN eq 1) then FIRMUS=1;
if USPLAN eq . or FIRMPLAN eq . then FIRMUS=.;
```

Time to Doctorate

Total time to degree (TTD): TTD measures the total elapsed time between the baccalaureate and the doctorate (including time not enrolled in school). TTD can be computed only for individuals whose baccalaureate year is known. Baccalaureate year is often obtained from commencement programs or doctorate institutions when not reported by the recipient. *Months are now included in the computation (see note below).*

Registered time to degree (RTD): RTD gauges the time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment may include years of attendance not related to a recipient's doctoral program. RTD can only be computed for individuals who provided all years of college attendance after the baccalaureate. *Months are now included in the computation (see note below).*

Note about medians: The method of computing medians, beginning with *Summary Report 1994*, is as follows. Months (of birth, baccalaureate, and doctorate) are included in the calculations whenever available; if months are missing, only years are used in the calculations. (However, medians are not computed for years prior to 1969 because doctorate month is unavailable for all doctorate recipients.) Medians presented in previous summary reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While differences are small (usually one- or two-tenths of a year), readers should consider these differences when comparing medians presented in the report with those in earlier reports.

IV. Changes to the 1999 SED

Citizenship

In 1999, a new category was added to the variable CITIZ to identify non-U.S. citizens for whom visa status was unknown. The new code frame for the data is as follows:

Code	Citizenship Category
0	U.S. Native
1	U.S. Naturalized Citizen
2	Non-U.S. Immigrant (Permanent Resident)
3	Non-U.S. Non-immigrant (Temporary Resident)
4	Non-U.S., Visa Status Unknown
Blank	Missing/Citizenship Unknown

In 1999, a logical assignment to code 4 was made if all follow-up attempts for missing citizenship were unsuccessful. The assignment was made for 1997, 1998, and 1999 records if three out of four variables – BIRTHPL, HSPLACE, EDPLACE, PDUSFOR – were non-U.S. locations. For the purposes of the tabulations in this report, code 4 was combined with code 3. This is consistent with what was done in previous rounds and seems well justified by an examination of the data. However, the existence of this new code will allow the data user to exclude the cases for which visa status is unknown if desired. One should keep in mind that the number of cases in this group (code 4) is not sufficient to warrant analysis as a separate group (n=342).

To match the numbers in this report, use the following code before analyzing citizenship:

```
/*RECODE CITIZ 4 */
IF (CITIZ eq '4') THEN CITIZ='3';
```

Birthplace, Country of Citizenship, and Postdoctoral Location

This is the first data cycle conducted after the unification of Hong Kong and the People's Republic of China. However, because previous rounds report values for Birthplace, Country of Citizenship, and Postdoctoral Location separately for these two locations, and because a number of respondents still reported their country of citizenship as Hong Kong, it was decided to continue to analyze these data separately. As a result, for the time being, in the tabulations of the variables using country locations in this report, figures reported for China do not include Hong Kong.

APPENDIX D

Survey of Earned Doctorates Questionnaire
Academic Year 1999

First Name | Middle Name | Last Name | Suffix (e.g., Jr.)

Cross reference: Birth name or former name legally changed

Survey of Earned Doctorates

July 1, 1998 to June 30, 1999

Conducted by
The National Opinion Research Center at the University of Chicago
for
The National Science Foundation
The National Institutes of Health
The National Endowment for the Humanities
The U.S. Department of Education
The U.S. Department of Agriculture

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To the Doctorate Recipient:

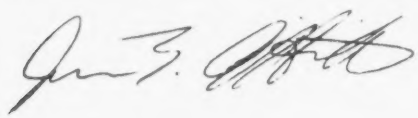
Congratulations on earning a doctoral degree! This is an important accomplishment for you. Your accomplishment is also significant for both this nation and others, as the new knowledge generated by research doctorates enhances the quality of life in this country and throughout the world. Because of the importance of persons earning research doctorates, several Federal agencies—listed on the cover—sponsor this Survey of Earned Doctorates.

The basic purpose of this survey is to gather objective data about doctoral graduates. These data are important in improving graduate education both at your home institution and beyond. Often, decisions made by governmental and private agencies to develop new programs, or to support present ones, are based in part on the data developed from this survey.

This form is distributed by the Graduate Deans and is filled out by all persons who have completed the requirements for a research doctoral degree. Please print your name on the cover if you have not already done so, and then complete this questionnaire and return it to the Graduate Dean. The confidentiality of the information you provide is carefully protected.

On behalf of the sponsoring Federal agencies, I thank you for your participation in this survey.

Best wishes,



Jeanne E. Griffith
Director, Division of Science Resources Studies

INSTRUCTIONS

Thank you for taking the time to complete this important questionnaire. Directions are provided for each question. Because not all questions will apply to everyone, you may be asked to skip certain questions.

- If you have not already done so, please print your name on the front cover.
- You may use either a pen or pencil.
- When answering questions that require marking a box, please use an "X."
- If you need to change an answer, please make sure that your old answer is either completely erased or clearly crossed out.
- On pages 8 and 9 (inside the back cover) is a Specialties List for classifying your field(s) of specialization in Questions A2, A10, B5, and B9.

Thanks again for your help; we really appreciate it.

PART A - Education

A1. What is the title of your dissertation?

Please mark (X) this box if the title below refers to a performance, project report or a musical or literary composition required instead of a dissertation

Title _____

A2. Using the Specialties List (pages 8-9), please write the name and number of the field of your dissertation research.

Name of field _____

Number of field ___ ___ ___

A3. After receiving your first bachelor's degree (or equivalent), and including the period spent on your dissertation, how many years were you a full-time student?

___ Years (whole numbers)

A4. Please check the category that most fully describes your employment or study status during the year immediately before the award of the doctorate.

Mark (X) one

- Full-time employed → *GO to A5*
- Held fellowship
- Held assistantship
- Part-time employed — *SKIP to A6*
- Not employed
- Other - *Specify*

A5. *(IF FULL-TIME EMPLOYED)* **What type of position did you hold?**

Mark (X) one

- College or university, faculty
- College or university, non-faculty
- Elementary or secondary school, teaching
- Elementary or secondary school, non-teaching
- Industry or business
- Other - *Specify*

A6. In what state or country was the high school/secondary school that you last attended?

State (if U.S.)

_____

OR

Country (if not U.S.)

_____

A7. When did you graduate from high school/ secondary school?

Month _____ Year 19 ___

A8. Please name the department (or interdisciplinary committee, center, institute, etc.) of the university that supervised your doctoral program.

Mark (X) box if none

_____

Department/Committee/Center/Institute/Program

A9. Please name the school or college within the university that supervised your doctoral program.

Mark (X) box if not applicable

_____

School or College within University

A10. Please list below, chronologically, all colleges (including 2-year) and graduate institutions you have attended and each degree earned (if any). Be sure to give the years attended for ALL institutions attended. Include your doctoral institution(s) and degree at the end.

Mark (X) box if bachelor's degree (or equivalent) was never received.

Mark (X) box if master's degree (or equivalent) was never received.

EXAMPLE Institution and Location	Years Attended		Field of Study		Degree (if any)		
			Use Specialties List, pages 8-9			Granted	
Institution / Branch or City / State or Province / Country (if not U.S.)	From	To	Field Name	Number	Title	Mo.	Yr.
Indian Institute of Technology / Madras / India	88	90	Mechanical Engineering	345	____	___	___
University of California / Berkeley / CA	90	92	Mechanical Engineering	345	B.S.	6	92

If you have attended more than six institutions of higher education, please continue this list on the back cover. Be sure to include your doctoral institution.

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A11. Which of the following were sources of money to cover living and/or educational expenses during your doctoral programs?

Mark (X) Yes or No for each	Yes	No	Don't Know
a. Loans (from any source)			
b. Foreign (non-U.S.) support			
c. Fellowship, scholarship			
d. Dissertation grant			
e. Teaching assistantship			
f. Research assistantship			
g. Traineeship			
h. Internship or residency			
i. Personal savings			
j. Other personal earnings during graduate school			
k. Spouse's, significant other's, or family earnings or savings			
l. Employer reimbursement assistance			
m. Other - *Specify*			

A12. Which TWO sources listed in A11 gave you the most support?

Enter letters of primary and secondary sources

1. _____ Primary source of support

Mark (X) if no primary source

2. _____ Secondary source of support

Mark (X) if no secondary source

A13. When you receive your doctoral degree, how much money will you owe that is directly related to your undergraduate and/or graduate education (tuition and fees, living expenses and supplies, transportation to and from school)?

- None
- $5,000 or less
- $5,001 - $10,000
- $10,001 - $15,000
- $15,001 - $20,000
- $20,001 - $25,000
- $25,001 - $30,000
- $30,001 or more

PART B - Postgraduation Plans

B1. How definite are your immediate postgraduate plans?

Mark (X) one

- Am returning to, or continuing in, predoctoral employment
- Have signed contract or made definite commitment for other work or study → *GO to B2, page 5*
- Am negotiating with one or more specific organizations
- Am seeking position but have no specific prospects → *SKIP to B3, page 5*
- Other - *Specify*

B2. Please name the organization and geographic location where you will work or study.

Name

City | State (if U.S.) | Country (if not U.S.)

SKIP to B4

B3. In what state or country do you intend to live after graduation?

Mark (X) one

in U.S. → State

not in U.S. → Country

B4. What best describes your immediate postgraduate plans?

Mark (X) one

Postdoctoral fellowship
Postdoctoral research associateship
Traineeship
Other study - *Specify*

Employment (other than 0,1,2,3)
Military service
Other - *Specify*

SKIP to B7

B5. Please use the Specialties List (pages 8-9) to enter the name and number of your postdoctoral field.

Name of field

Number of field

B6. What will be the main source of financial support for your postdoctoral study/research?

Mark (X) one

U.S. Government
College or university
Private foundation
Nonprofit, other than private foundation
Other - *Specify*

Unknown

SKIP to C1, page 6

B7. For what type of employer will you be working?

Mark (X) one

EDUCATION
- U.S. 4-year college or university other than medical school
- U.S. medical school
- U.S. junior or community college
- Elementary or secondary school
- Foreign institution

GOVERNMENT
- Foreign government
- U.S. federal government
- U.S. state government
- U.S. local government

PRIVATE SECTOR
- Nonprofit organization
- Industry or business
- Self-employed

OTHER
- Other - *Specify*

B8. From the list below, please indicate what your primary and secondary work activities will be by entering the numbers of your selections in the appropriate boxes:

Enter numbers from below:

a. ____ Primary Activity

b. ____ Secondary Activity

0 Research and development
1 Teaching
2 Administration
3 Professional services to individuals
5 Other - *Specify*

B9. Please use the Specialties List (pages 8-9) to enter the name and number of the field in which you will be working.

Name of field

Number of field

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PART C - Background Information

C1. Are you -

Male
Female

C2. What is your marital status?

Mark (X) one

Married
Living in a marriage - like relationship
Widowed
Separated/divorced
Never married

C3. Not including yourself, how many dependents do you have - that is, how many others receive at least one half of their support from you?

_____ Number

C4. What is the highest educational attainment of your mother and father?

Mark (X) one for each parent

	a. Mother	b. Father
Less than high school/ secondary school		
High-school/secondary-school graduate		
Some college		
Bachelor's degree		
Master's degree		
Professional degree		
Doctoral degree		

C5. What is your place of birth?

State (if U.S.)

_____

OR

Country (if not U.S.)

_____

C6. What is your date of birth?

Month _____ Day _____ Year 19 _____

C7. What is your citizenship status?

Mark (X) one

U.S. Citizen:

Native Born
Naturalized _____ ▶ *SKIP to C9*

Non-U.S. Citizen:

With a Permanent U.S. Resident Visa
With a Temporary U.S. Resident Visa

C8. *(IF A NON-U.S. CITIZEN)* **Of which country are you a citizen?**

_____

(Specify country of present citizenship)

C9. Are you a person with a disability?

Yes
No ▶ *SKIP to C11*

C10. *(IF YES)* **Which of the following categories describes your disability?**

Visual
Orthopedic (mobility)
Auditory (hearing)
Vocal
Other - *Specify* _____

C11. Are you Hispanic?

Yes ▶ *GO to C12, page 7*
No ▶ *SKIP to C13, page 7*

C12. *(IF YES TO C11)* **Which of the following describes your Hispanic origin or descent?**

Mexican American
Puerto Rican
Other Hispanic - *Specify*

C13. What is your racial background?

Mark (X) one

American Indian or Alaskan Native
Asian or Pacific Islander
Black
White

C14. Please fill in your U.S. Social Security Number.

___ – ___ – ____

C15. In case we need to clarify some of the information you have provided, please list a telephone number and e-mail address (if available) where you can be reached.

Daytime telephone _____

Evening telephone _____

E-mail address _____

C16. Because we are interested in how education relates to employment over time, we may be recontacting you. To help us, please provide the name, address, and telephone number of one person who is likely to know where you can be reached. As with all information provided in this questionnaire, complete confidentiality will be provided.

Care of (if applicable)

Number and Street

City/Town | State or Province | Zip Code or Postal Code

Country (if outside U.S.) | Phone Number (including area or country code)

C17. Please sign and date.

Signature | Date

Mark (X) box if you would like a summary of the results of this survey (available as funding permits).

Results of the Survey of Earned Doctorates can be found on the National Science Foundation's World Wide Web page at http://www.nsf.gov/sbe/srs/stats.htm

Please use the back cover to make any additional comments you may have about this survey.

Thank you for completing the questionnaire. Please return it to the GRADUATE DEAN for forwarding to Survey of Earned Doctorates, National Opinion Research Center at the University of Chicago, 1525 East 55th Street, Chicago, IL 60615. Should you need to call us, our toll free number is 1-800-248-8649.

SPECIALTIES LIST

INSTRUCTIONS: The following field listing is to be used in responding to items A2, A10, B5, and B9. If you choose a field marked with an asterisk (*), please write in your field of specialization in the space provided in those items.

AGRICULTURAL SCIENCES
000 Agricultural Economics
002 Agricultural Business & Mgmt.
005 Animal Breeding & Genetics
010 Animal Nutrition
012 Dairy Science
014 Poultry Science
055 Fisheries Sci. & Management
019 Animal Sciences, Other*
020 Agronomy & Crop Science
025 Plant Breeding & Genetics
030 Plant Pathology (See also 120)
039 Plant Sciences, Other*
043 Food Engineering
044 Food Sciences, Other*
046 Soil Chemistry/Microbiology
049 Soil Sciences, Other*
050 Horticulture Science
066 Forest Biology
068 Forest Engineering
070 Forest Management
072 Wood Sci. & Pulp/Paper Tech.
074 Conserv./Renewable Natural Res.
079 Forestry & Related Sci., Other*
080 Wildlife/Range Management
098 Agricultural Sci., General
099 Agricultural Sci., Other*

BIOLOGICAL SCIENCES
100 Biochemistry
103 Biomedical Sciences
105 Biophysics
107 Biotechnology Research
110 Bacteriology
115 PlantGenetics
120 Plant Pathology (See also 030)
125 Plant Physiology
129 Botany, Other*
130 Anatomy
133 Biometrics & Biostatistics
136 Cell Biology (See also 154)
139 Ecology
142 Developmental Bio./Embryology
145 Endocrinology
148 Entomology
151 Biological Immunology
154 Molecular Biology
157 Microbiology
160 Neuroscience
163 Nutritional Sciences
166 Parasitology
169 Toxicology
170 Genetics, Human & Animal
175 Pathology, Human & Animal (See also 120)
180 Pharmacology, Human & Animal
185 Physiology, Human & Animal
189 Zoology, Other*
198 Biological Sciences, General
199 Biological Sciences, Other*

HEALTH SCIENCES
200 Speech-Lang. Pathology & Audiology
210 Environmental Health
212 Health Systems/Service Admin.
215 Public Health
220 Epidemiology (See also 133)
222 Exercise Physiology/ Sci., Kinesiology
230 Nursing
240 Pharmacy
245 Rehabilitation/Therapeutic Services
250 Veterinary Medicine
298 Health Sciences, General
299 Health Sciences, Other*

ENGINEERING
300 Aerospace, Aeronaut. & Astronaut.
303 Agricultural
306 Bioengineering & Biomedical
309 Ceramic Sciences
312 Chemical
315 Civil
318 Communications
321 Computer
324 Electrical & Electronics
327 Engineering Mechanics
330 Engineering Physics
333 Engineering Science
336 Environmental Health Engineering
339 Industrial & Manufacturing
342 Materials Science
345 Mechanical
348 Metallurgical
351 Mining & Mineral
357 Nuclear
360 Ocean
363 Operations Research (See also 465, 930)
366 Petroleum
369 Polymer & Plastics
372 Systems
398 Engineering, General
399 Engineering, Other*

COMPUTER AND INFORMATION SCIENCES
400 Computer Science
410 Information Science & Systems*

MATHEMATICS
420 Applied Mathematics
425 Algebra
430 Analysis & Functional Analysis
435 Geometry
440 Logic (See also 785)
445 Number Theory
450 Mathematical Statistics
455 Topology
460 Computing Theory & Practice
465 Operations Research (See also 363, 930)
498 Mathematics, General
499 Mathematics, Other*

PHYSICAL SCIENCES

Astronomy
500 Astronomy
505 Astrophysics

Atmospheric Sci. and Meteorology
510 Atmospheric Physics & Chemistry
512 Atmospheric Dynamics
514 Meteorology
518 Atmos. Sci./Meteorol., General
519 Atmos. Sci./Meteorol., Other*

Chemistry
520 Analytical
522 Inorganic
524 Nuclear
526 Organic
528 Medicinal/Pharmaceutical
530 Physical
532 Polymer
534 Theoretical
538 Chemistry, General
539 Chemistry, Other* (See 100 Biochemistry)

Geological & Related Sciences
540 Geology
542 Geochemistry
544 Geophysics & Seismology
546 Paleontology
548 Mineralogy & Petrology
550 Stratigraphy & Sedimentation
552 Geomorphology & Glacial Geology
558 Geolog. & Related Sci., General
559 Geolog. & Related Sci., Other*

Physics
560 Acoustics
561 Chemical & Atomic/Molecular
564 Elementary Particle
566 Fluids
568 Nuclear
569 Optics
570 Plasma & High-Temperature
572 Polymer

SPECIALTIES LIST (continued)

574 Solid State & Low-Temperature
578 Physics, General
579 Physics, Other*

Miscellaneous Physical Sciences
580 Environmental Science
585 Hydrology & Water Resources
590 Oceanography
595 Marine Sciences
599 Misc. Physical Sciences, Other*

PSYCHOLOGY
600 Clinical
603 Cognitive & Psycholinguistics
606 Comparative
609 Counseling
612 Developmental & Child
613 Human/Indiv. & Family Devlpmt.
615 Experimental
618 Educational (See also 822)
620 Family & Marriage Counseling
621 Indust. & Organiz. (See also 935)
624 Personality
627 Physiological/Psychobiology
630 Psychometrics
633 Quantitative
636 School (See also 825)
639 Social
648 Psychology, General
649 Psychology, Other*

SOCIAL SCIENCES
650 Anthropology
652 Area Studies
658 Criminology
662 Demography/Population Studies
666 Economics
668 Econometrics
670 Geography
674 International Relations/Affairs
678 Political Sci. & Government
682 Public Policy Analysis
686 Sociology
690 Statistics (See also 450)
694 Urban Affairs/Studies
698 Social Sciences, General
699 Social Sciences, Other*

HUMANITIES

History
700 History, American
703 History, Asian
705 History, European
710 History/Philosophy of Sci. & Tech.
718 History, General
719 History, Other*

Letters
720 Classics
723 Comparative Literature
729 Linguistics
732 Literature,American
733 Literature, English
734 English Language
736 Speech & Rhetorical Studies
738 Letters, General
739 Letters, Other*

Foreign Languages and Literature
740 French
743 German
746 Italian
749 Spanish
752 Russian
755 Slavic (other than Russian)
758 Chinese
762 Japanese
765 Hebrew
768 Arabic
769 Other Languages & Literature*

Other Humanities
770 American Studies
773 Archeology
776 Art History/Criticism/Conserv.
780 Music
785 Philosophy (See also 440)
790 Religion (See also 984)
795 Drama/Theater Arts
798 Humanities, General
799 Humanities, Other*

EDUCATION
800 Curriculum & Instruction
805 Educational Admin. & Supervision
807 Educational Leadership
810 Educ./Instruct. Media Design
815 Educ. Stat./Research Methods
820 Educ. Assess./Test./Meas.
822 Educ. Psychology (See also 618)
825 School Psychology (See also 636)
830 Social/Phil. Found. of Education
835 Special Education
840 Couns. Educ./Couns. & Guid. Serv.
845 Higher Education/Eval. & Research

Teacher Education
850 Pre-elementary/Early Childhood
852 Elementary
856 Secondary
858 Adult & Continuing

Teaching Fields
860 Agricultural Education
861 Art Education
862 Business Education
864 English Education
866 Foreign Languages Education
868 Health Education
870 Home Economics Education
872 Tech. & Indust. Arts Education
874 Mathematics Education
876 Music Education
878 Nursing Education
880 Physical Education & Coaching
882 Reading Education
884 Science Education
885 Social Science Education
887 Technical Education
888 Trade & Industrial Education
889 Teacher Educ., Specific Acad. & Voc. Prog., Other*

Other Education
898 Education, General
899 Education, Other*

PROFESSIONAL FIELDS

Business Management and Administrative Services
900 Accounting
905 Banking/Financial Support Serv.
910 Business Admin. & Management
915 Business/Managerial Economics
916 International Business
917 Mgmt. Info. Sys./Bus. Data Proc.
920 Marketing Management & Research
930 Operations Research (See also 363, 465)
935 Organiz. Behavior (See also 621)
938 Bus. Mgmt./Admin. Serv., Gen.
939 Bus. Mgmt./Admin. Serv., Other*

Communications
940 Communications Research
947 Mass Communications
957 Communication Theory
958 Communications, General
959 Communications, Other* (See also 736)

Other Professional Fields
960 Architec. Environ. Design
964 Home Economics
968 Law
972 Library Science
974 Parks/Rec./Leisure/Fitness
976 Public Administration
980 Social Work
984 Theol./Religious Education (See also 790)
988 Professional Fields, General
989 Professional Fields, Other*

OTHER FIELDS*
999 Other

Comments About This Survey

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APPENDIX E

Field Classification and Research Degree Titles

APPENDIX E: Field Classification and Research Degree Titles

The appendix tables present data according to the following field classifications. Appendix Tables A-1 and A-2 and Appendix Table B-1 display all subfields that are on the survey Specialties List. Appendix Tables A-4, A-5, and A-6 show data by seven broad fields only. Appendix Tables A-3 and A-7 include the additional field groupings indicated below.

SCIENCES

Physical Sciences (400-599)
- Physics and Astronomy (500-505, 560-579)
- Chemistry (520-539)
- Earth, Atmospheric, and Marine Sciences (510-519, 540-559, 590-599)
- Mathematics (420-499)
- Computer Sciences (400-410)

Combined in Table A-7

Engineering (300-399)

Life Sciences (000-299)
- Biological Sciences (100-199)
  - Biochemistry (100)
  - Other Biological Sciences (103-199)
- Health Sciences (200-299)
- Agricultural Sciences (000-099)

Social Sciences (600-699)
- Psychology (600-649)
- Economics and Econometrics (666, 668)
- Anthropology and Sociology (650, 686)
- Political Science and International Relations (674-678)
- Other Social Sciences (652-662, 670, 672, 682, 690-699)

Combined in Table A-7

NONSCIENCES

Humanities (700-799)
- History (700-719)
- English and American Language and Literature (732-734)
- Foreign Languages and Literature (740-769)
- Other Humanities (720-729, 736-739, 770-799)

Combined in Table A-7

Education (800-899)

Professional and Other Fields (900-999
- Business and Management (900-939)
- Other Professional Fields (940-989)
- Other Fields (999)

NOTE: Doctorate recipients indicate their fields of specialty. Their choices may differ from departmental names.

TITLES OF RESEARCH DEGREES INCLUDED IN THE SURVEY OF EARNED DOCTORATES

DA/DAT	**Doctor of Arts/Arts in Teaching**	**DMM**	**Doctor of Music Ministry**
DArch	**Doctor of Architecture**	**DMSc**	**Doctor of Medical Science**
DAS	**Doctor of Applied Science**	**DNSc**	**Doctor of Nursing Science**
DBA	**Doctor of Business Administration**	**DPA**	**Doctor of Public Administration**
DChem	**Doctor of Chemistry**	**DPE**	**Doctor of Physical Education**
DCJ	**Doctor of Criminal Justice**	**DPH**	**Doctor of Public Health**
DCL	**Doctor of Comparative Law/Civil Law**	**DPS**	**Doctor of Professional Studies**
DCrim	**Doctor of Criminology**	**DrDES**	**Doctor of Design**
DED	**Doctor of Environmental Design**	**DRec/DR**	**Doctor of Recreation**
DEng	**Doctor of Engineering**	**DSc/ScD**	**Doctor of Science**
DEnv	**Doctor of Environment**	**DScD**	**Doctor of Science in Dentistry**
DESc/ScDE	**Doctor of Engineering Science**	**DScH**	**Doctor of Science and Hygiene**
DF	**Doctor of Forestry**	**DScVM**	**Doctor of Science in Veterinary Medicine**
DFA	**Doctor of Fine Arts**	**DSM**	**Doctor of Sacred Music**
DGS	**Doctor of Geological Science**	**DSSc**	**Doctor of Social Science**
DHL	**Doctor of Hebrew Literature/Letters**	**DSW**	**Doctor of Social Work**
DHS	**Doctor of Health and Safety**	**EdD**	**Doctor of Education**
DHS	**Doctor of Hebrew Studies**	**JCD**	**Doctor of Canon Law**
DIT	**Doctor of Industrial Technology**	**JSD**	**Doctor of Juristic Science**
DLS	**Doctor of Library Science**	**LScD**	**Doctor of Science of Law**
DM	**Doctor of Music**	**PhD**	**Doctor of Philosoph**
DMA	**Doctor of Musical Arts**	**RhD**	**Doctor of Rehabilitation**
DME	**Doctor of Musical Education**	**SJD**	**Doctor of Juridical Science**
DML	**Doctor of Modern Languages**	**ThD**	**Doctor of Theology**

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NSF Publications from the Doctorate Data Project

DATA BRIEFS	ISSUE BRIEFS	REPORTS
Healthy Economy Yields Even Lower Unemployment Rate for Doctoral Scientists and Engineers	Ph.D. Unemployment Trends: Cause for Alarm?	Science and Engineering Doctorate Awards: 1999
Doctorate Awards Declining in Some Science and Engineering Fields	What's Happening in the Labor Market for Recent Science and Engineering Ph.D. Recipients?	Science and Engineering Doctorates: 1960-91
Despite Increases, Women and Minorities Still Underrepresented in Undergraduate Science and Engineering Education	Is the Gender Gap in Unemployment Disappearing?	Characteristics of Doctoral Scientists and Engineers in the U.S.: 1997
Doctoral Awards Increase in S&E Overall, But Computer Science Declines for First Time	What is Happening to Academic Employment of Scientists and Engineers?	Trend Tables on Doctoral Scientists and Engineers in the U.S.: 1993-97 (Web only)
Employment of Scientists and Engineers Reaches 3.2 Million in 1995	International Mobility of Scientists and Engineers to the United States – Brain Drain or Brain Circulation	Who is Unemployed? Factors Affecting Unemployment Among Individuals with Doctoral Degrees in Science and Engineering
Number of Doctoral Scientists and Engineers Grows by 6% Between 1993 &1995	What is the Debt Burden of New Science and Engineering Ph.D.'s?	Science and Engineering State Profiles: 1998
Data sources and publications sources:	Are Forms of Financial Support and Employment Choices of Recent Science and Engineering Ph.D.'s Related?	Doctoral Scientists and Engineers in the U.S.: 1997 Profile Tables
These publications contain data from 1) the annual Survey of Earned Doctorates(a universe survey on the education of research doctorates) or	Does the Educational Debt Burden of Science and Engineering Doctorates Differ by Race/Ethnicity and Sex?	Modes of Financial Support in the Graduate Education of S&E Doctorate Recipients
2) the biennial Survey of Doctorate Recipients (a longitudinal sample survey of workforce characteristics).	Degrees and Occupations in Engineering: How Do They Diverge?	Statistical Profiles of Foreign Doctoral Recipients in Science and Engineering: Plans to Stay in the United States
Complete electronic information on these surveys and publications may be obtained on the web at: www.nsf.gov/sbe/stats.htm.	Has the Use of Postdocs Changed?	Women, Minorities, and Persons with Disabilities in Science and Engineering: 2000
	How Much Does the U.S. Rely on Immigrant Engineers?	Science and Engineering Degrees: 1966-97
Written reports may be ordered online (www.nsf.gov/home/orderpub.htm) or by calling 301-947-2722.	What Follows Postdoctorate Experience? Employment Patterns of 1993 Postdocs in 1995	Science and Engineering Degrees, by Race/Ethnicity of Recipients: 1989-97
For further information please contact Susan T. Hill, Director, Doctorate Data Project, sthill@nsf.gov.	How Large is the Gap in Salaries of Male and Female Engineers?	SESTAT: A Tool for Studying Scientists and Engineers in the United States

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